

Amendments to the Specification:

Please replace the paragraph beginning at page 1, line 4, with the following:

The present application claims priority to USSN 60/421,989, filed October 29, 2002, and USSN 60/____512,251, ~~TTC Ref. No. 021044-005810~~, filed October 17, 2003, each herein incorporated by reference in their entirety.

Please replace the paragraph beginning at page 4, line 23, with the following:

--Figure 14 shows that Axl RNAi reduces Axl protein expression. Axl 2 = SEQ ID NOS:61 and 62; Axl-2 = SEQ ID NO:63; Axl2 = SEQ ID NO:64; Axl4 = SEQ ID NOS:65 and 66; Axl4.2 = SEQ ID NOS:67 and 68; Axl-4 = SEQ ID NO:69; Axl4 = SEQ ID NO:70; Axl4.2 = SEQ ID NO:71.--

Please replace the paragraph beginning at page 11, line 15, with the following:

--The terms "identical" or percent "identity," in the context of two or more nucleic acids or polypeptide sequences, refer to two or more sequences or subsequences that are the same or have a specified percentage of amino acid residues or nucleotides that are the same (i.e., about 70% identity, preferably 75%, 80%, 85%, 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, or higher identity over a specified region (e.g., ~~SEQ ID NO:1 or 2~~ SEQ ID NO:3 or 4), when compared and aligned for maximum correspondence over a comparison window or designated region) as measured using a BLAST or BLAST 2.0 sequence comparison algorithms with default parameters described below, or by manual alignment and visual inspection (*see, e.g.*, NCBI web site or the like). Such sequences are then said to be "substantially identical." This definition also refers to, or may be applied to, the complement of a test sequence. The definition also includes sequences that have deletions and/or additions, as

well as those that have substitutions. As described below, the preferred algorithms can account for gaps and the like. Preferably, identity exists over a region that is at least about 25 amino acids or nucleotides in length, or more preferably over a region that is 50-100 amino acids or nucleotides in length.--

Please replace the paragraph beginning at page 38, line 8, with the following:

--Common linkers such as peptides, polyethers, and the like can also serve as tags, and include polypeptide sequences, such as poly gly Gly sequences of between about 5 and 200 amino acids (SEQ ID NO:72). Such flexible linkers are known to persons of skill in the art. For example, ~~poly(ethelyne glycol)~~ poly(ethylene glycol) linkers are available from Shearwater Polymers, Inc. Huntsville, Alabama. These linkers optionally have amide linkages, sulfhydryl linkages, or heterofunctional linkages.--

Please replace the informal "SEQUENE LISTING at pages 50-78 with the following:

--SEQUENCE LISTING

Ax1

GH2_420_G3F1 (SEQ ID NO:1)

CTCCAGGGGTTTCAGGATAACCTCCACCCTCATCCATGTTGACATAGAGGATTTTCGTCAGGCTCCTGGGCAGGAGGCA
AGG

GH2_420_G3R1 (SEQ ID NO:2)

ATCTATCTAACCCTGTGCTTGGGTTCTGCGGCCTTGCCCTCCTGCCCAGGAGCCTGACGAAATCCTCTATGTCAACA
TGGATGAGGGTGGAGGTTATCCTGAACCCCTGGAG

>gi|21536465|ref|NM_021913.2| Homo sapiens AXL receptor tyrosine kinase (AXL), transcript variant 1, mRNA (SEQ ID NO:3)

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GAAAGAGCTGATCCTCTCCTCTCTTGAGTTAACCCTGATTGTCCAGGTGGCCCCCTGGCTCTGGCCTGGT
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GGGGTGCTGAGAAGGCGGCTGCTGGGCAGAGCCGGTGGCAAGGGCCTCCCCTGCCGCTGTGCCAGGCAGG
CAGTGCCAAATCCGGGGAGCCTGGAGCTGGGGGGAGGGCCGGGGACAGCCCGGCCCTGCCCCCTCCCCCG
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CCCGCTGGCCTGGTGTCTGGCGCTGTGCGGCTGGGCGTGCATGGCCCCCAGGGGCACGCAGGCTGAAGAA
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>gi|21536466|ref|NP_068713.2| AXL receptor tyrosine kinase isoform 1; AXL
transforming sequence/gene; oncogene AXL [Homo sapiens] (SEQ ID NO:4)
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PADCLDGLYALMSRCWELNPQDRPSFTELREDLENTLKALPPAQEPDEILYVNMDEGGGYPEPPGAAGGA
DPPTQPDPKDSCSLTAAEVHPAGRYVLCPTSTTSPAPQPADRGSPAAPGQEDGA

>gi|21536467|ref|NM_001699.3| Homo sapiens AXL receptor tyrosine kinase
(AXL), transcript variant 2, mRNA (SEQ ID NO:5)
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>gi|21536468|ref|NP_001690.2| AXL receptor tyrosine kinase isoform 2; AXL transforming sequence/gene; oncogene AXL [Homo sapiens] (SEQ ID NO:6)
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VPLEAWRPVKEPSTPAFSWPWWYVLLGAVVAAACVLILALFLVHRRKKETRYGEVFEPTVERGELVVRYR
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KIAICTRSELEDFLSEAVCMKEFDHPNVMRLIGVCFQGSERESFPAPVVILPFMKHGDLSHFLYSRLGD
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Tubulin cofactor D

GH1-13-PCR-G3F1 (SEQ ID NO:7)
CTTCCGCAGCAGGGTCTGGTTGCTCTCAGGGAGTCTGCAGCCATCGAGGCACCTGAGGACAGTGGCAGCATAGGGCA
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>gi|8400735|ref|NM_005993.2| Homo sapiens tubulin-specific chaperone d (TBCD), mRNA (SEQ ID NO:8)
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TCACTTTCCAAAATGCCCTTTAGAGGTGACACCGTAATTGATGGTTGGCAATGGCTGATAAATGACACTT
TGAGACATCTCCATCTCATCTCAAGTCACTCCCGCCAGCAGATGAAGGATGCAGCAGTCTCGGCCCTGGC
TGCTCTATGCAGTGAATATTACATGAAGGAGCCGGGGGAGGCAGATCCCGCAATTCAGGAGGAGCTGATC
ACGCAGTACCTGGCTGAGCTTCGGAACCCCGAGGAGATGACTCGCTGTGGCTTCTCGTTGGCCTTGGGCG
CCCTTCCAGGCTTCCTTCTGAAAGGCCGGCTCCAGCAGGTTCTCACAGGTTTAAGAGCAGTTACCCACAC
TTCCCCCGAGGACGTAAGTTTGTGAGTCCAGGAGAGACGGCTTGAAGGCCATTGCGAGGATTTGCCAG
ACTGTTGGTGTGAAAGCAGGAGCCCCAGACGAAGCTGTGTGCGGAGAGAATGTTTCCCAATTTACTGTG
CGTGCTGGGTGTCATGGACGACTACACCACGGACAGCAGAGGGGACGTGGGCACCTGGGTCCGCAAGGC
CGCCATGACCAGTCTGATGGATCTGACACTTCTGCTGGCTCGGAGCCAGCCTGAGCTGATCGAGGCCCAT
ACCTGTGAGCGCATCATGTGCTGTGTGGCCAGCAGGCCAGTGAGAAGATTGACCGTTTCCGTGCTCACG
CCGCCAGCGTGTTCCTGACGCTCCTGCACCTTGACAGCCCTCCCATCCCCACGTGCCCCACCGAGGAGA
ACTGGAAGCTGTTTCCAGGTCCGATGTGGCCTCCGTGAAGTGGAGTGCACCTTCCAGGCCTTCCCA
CGCATACCCAGCTCCTTGGGCTGCCCACCTACCGCTACCACGTCCTGCTGGGGCTAGTCGTGTCCCTGG
GCGGCTTGACGGAGTCGACGATCCGGCACTCCACCCAGAGCCTCTTTGAGTACATGAAGGGCATTACAGAG
CGACCCGACAGGCCCTGGGCAGCTTCAGCGGGACCTTCTGCAGATCTTTGAGGACAACCTTCTGAATGAG
AGGGTGTCCGTGCCGCTGCTGAAGACGCTGGACCACGTGCTCACCACGGCTGCTTCGACATCTTCACCA
CGGAGGAGGACCACCCCTTTGCTGTGAAGTTGCTTGCCTCTGTAAGAAAGAAATCAAGAATTCAAAGA
TATCCAGAAGCTCCTGTCAGGCATCGCAGTGTCTGCGGGATGGTGCAGTTCCCCGGCGACGTGAGGAGG
CAGGCCCTCCTGCAGCTGTGTCTGCTCCTCTGCCACCGTTTCCCGCTGATCCGGAAGACCACGGCCAGCC
AGGTGTACGAGACATTGCTCACCTACAGTGACGTCGTGGGCGCGGATGTGCTGGACGAGGTGGTGAAGTGT
GCTCAGTGACACTGCGTGGGACGCGGAGCTTGAGTGGTGAGAGAGCAGCGCAACCGTCTGTGTGACCTT
CTGGGCGTACCCAGGCCCCAGCTGGTGCCCCAGCCTGGTGCTGCTGAAGCCAGTCTGGAGCCCATACC
TCACCCCTGCCTGGTGAGGATGTCTTGTTCCTGAGGGAGGCCGGTGTGGAAAGCCTTGACAGTGGTGCC
TCCAGCTGTTGAAGGTTAGCGCTGGCCCTTGGAGGCTGGCACTAGCTGACAGCTTTTCTCTCTGCACCT
GCGCTCTGGTGACTTGGGGTGGACGCCTCTGCCTTCACTTGAACACAAATGTGCTTCTATAAAATCATG
TACCAAG

>gi|8400736|ref|NP_005984.2| beta-tubulin cofactor D [Homo sapiens] (SEQ ID NO: 9)

MALSDEPAAGGPEEEAEDETLAGAALAEAFGESAEETRALLRRLREVHGGGAEREVALERFRVIMDKYQEQ
PHLLDPHLEWMMNLLLDIVQDQTSASLVHLAFKFLYIITKVRGYKTFRLRFPHEVADVEPVLDLVTIQN
PKDHEAWETRYMLLLWLSVTCCLIPDFSRLDGNLLTQPGQARMSIMDRILQIAESYLIVSDKARDAAVL
VSRFITRPDVQSKMAEFLDWSLCNLARSSFQTMQGVITMDGTLQALAQIFKHGKREDCLPYAATVLRCL
DGCRLPESNQTLLRKLGVKLQRLGLTFLKPKVAAWRYQRCRSLAANLQLLTQGQSEQKPLILTEDDDE
DDDVPEGVERVIEQLLVGLKDKDTVVRWSAAKGIGRMAGRLPRALADDVVGSVLDCFSFQETDKAWHGGC
LALAEELGRRGLLLPSRLVDVVAVILKALTYDEKRGACSVGTNVRDAACYVCCAFARAYEPQELKPFVTAI
SSALVIAAVFDRDINCRRAASAAAFQENVGRQGTFFPHGIDILTTADYFAVGNRSNCFLVISVFIAGFPEYT
QPMIDHLVTMKISHWDGVIRELAARALHNLAQQAPEFSATQVFPRLSMTLSPDLHMRHGSILACAEVAY
ALYKLAAQENRPVTDHLDEQAVQGLKQIHQQLYDRQLYRGLGGQLMRQAVCVLIEKLSLSKMPFRGDTVI
DGWQWLINDTLRHLHLISSHSRQMKDAVSAALACEYIMKEPGEADPAIQEELITQYLAELRNPEEM
TRCGFSLALGALPGFLLKGRLLQVLTGLRAVTHTSPEDEVSAESRRDGLKAIARICQTVGVKAGAPDEAV
CGENVSQIYCALLGCMDDYTTDSRGDVGTVWRKAAMTSLMDLTLLLLARSQPELIEAHTCERIMCCVAQQA
SEKIDRFRAHAASVFLTLHLHFDSPPIPHVPHRGELEKLFPRSDVASVNWAPSQAAPRITQLLGLPTYRY
HVLLGLVSLGGLTESTIRHSTQSLFEYMKIQSDPQALGSFSGTLLQIFEDNLLNERVSVPLKLTLDHV
LTHGCFDIFTTEEDHPFAVKLLALCKKEIKNSKDIQKLLSGIAVFCGMVQFPGDVRRQALLQLCLLLCHR

FPLIRKTTASQVYETLLTYSDVVGADVLDEVVTVLSDTAWDAELAVVREQRNRLCDLLGVPRPQLVPQPG
AC

Transglutaminase 2

GH1-173-PCR-G3F1 (SEQ ID NO:10)

CCAGTGTGCTTGGGTTCTGCGGCACCCTGGATCTCCCCAACTCATTGCGGAAGTACTCGATGAGAAGGTTGCTGTT
CTGGTCATGGGCCGAGTTGTAGTTGGTCACGACGCGGGTAGGGATGCCAGGCACCTCAGCACTGTGCAGGCCACGG
CGGCAAGACCCAGCACTGGCCATACTTGACGCGCTGGCAGCCGTGGTTCTTCCAGCGCCGAGGATGTCCACGCTGC
CGATCCAGGACATGGGGCTGACCCGAGACCCAGCACAGTGGTTAGATGATAAAGCGGCCGCTCGACTAGTCTGAGG
TCTGATACTCACTGACTGTCGTA

gi|20141877|sp|P21980|TGM2_HUMAN Protein-glutamine gamma-glutamyltransferase
(Tissue transglutaminase) (TGase C) (TGC) (TG(C)) (Transglutaminase 2)
(TGase-H) (SEQ ID NO:11)

MAEELVLERCDLELETNGRDHHTADLCREKLVVRRGQPFWLTLEHFEGRNYEASVDSLTFSSVVTGPAPSQE
AGTKARFPLRDAVEEGDWTATVVDQDCTLSLQLTTPANAPIGLYRLSLEASTGYQGSSFVLGHFILLFN
AWCPADAVYLDSEERQEQEYVLTQQGFIYQGSAKFIKNI PNWFGQFEDGILDICLILLDVNPKFLKNAGRD
CSRRSSPVYVGRVVS GMVNCNDDQGVLLGRWDNNYGDGVSPMSWIGSVDILRRWKNHGCQRVKYQGCWVF
AAVACTVLRCLGIPTRVVTNYS AHDQNSNLLIEYFRNEFGEIQGDKSEMIWNFHCWVESWMTRPDLQPG
YEGWQALDPTPQEKSEGTYYCCGPVPVRAIKEGDLSTKYDAPFVFAEVNADVVDWIQQDDGSVHKSINRSL
IVGLKISTKSVGRDEREDITHYKYPEGSSEEREAFTRANHLNKLAEKEETGMAMRIRVGQSMNMGSDFD
VFAHITNNTAEYVCRLLLCARTVSYNGILGPEGCTKYLLNLNLEPFSEKSVPLCILEKYRDLCTESNL
IKVRALLVEPVINSYLLAERDLYLENPEIKIRILGEPKQKRKLVAEVS LQNPLPVALEGCTFTVEGAGLT
EEQKTVEIPDPVEAGEEVKVRMDLLPLHMLHLKLVVNFESDKLKAVKGFRNVIIGPA

>gi|4759227|ref|NM_004613.1| Homo sapiens transglutaminase 2 (C polypeptide,
protein-glutamine-gamma-glutamyltransferase) (TGM2), mRNA (SEQ ID NO:12)

AACAGGCGTGACGCCAGTTCTAACTTGAAACAAAACAACTTCAAAGTACACCAAATAGAACCTCCT
TAAAGCATAAATCTCACGGAGGGTCTCGGCCGCCAGTGGAAGGAGCCACCGCCCCCGCCCGACCATGGC
CGAGGAGCTGGTCTTAGAGAGGTGTGATCTGGAGCTGGAGACCAATGGCCGAGACCACACACGGCCGAC
CTGTGCCGGGAGAAGCTGGTGGTGCGACGGGGCCAGCCCTTCTGGCTGACCCTGCACCTTTGAGGGCCGCA
ACTACCAGGCCAGTGTAGACAGTCTCACCTTCAGTGTCTGACCGGCCAGCCCTAGCCAGGAGGCCG
GACCAAGGCCCGTTTTTCCACTAAGAGATGCTGTGGAGGAGGGTGACTGGACAGCCACCGTGGTGACCAG
CAAGACTGCACCCTCTCGCTGCAGCTCACCACCCCGCCAACGCCCCCATCGGCCTGTATCGCCTCAGCC
TGGAGGCCTCCACTGGCTACCAGGGATCCAGCTTTGTGCTGGGCCACTTCATTTTGCTCTTCAACGCCTG
GTGCCAGCGGATGCTGTGTACCTGGACTCGGAAGAGGAGCGGCAGGAGTATGTCCTCACCAGCAGGGC
TTTATCTACCAGGGCTCGGCCAAGTTCATCAAGAACATACCTTGGAATTTTGGGCAGTTTCAAGATGGGA
TCCTAGACATCTGCCTGATCCTTCTAGATGTCAACCCCAAGTTCTTGAAGAACGCCGGCCGTGACTGCTC
CCGGCGCAGCAGCCCCGTCTACGTGGGCCGGGTGGGTAGTGGCATGGTCAACTGCAACGATGACCAGGGT
GTGCTGCTGGGACGCTGGGACAACAACCTACGGGGACGGCGTCAGCCCCATGTCCTGGATCGGCAGCGTGG
ACATCCTGCGGCGCTGGAAGAACCACGGCTGCCAGCGCGTCAAGTATGGCCAGTGCTGGGTCTTCGCCCGC
CGTGGCCTGCACAGTGCTGAGGTGCCTAGGCATCCCTACCCGCGTCTGTACCAACTACAACCTCGGCCCAT
GACCAGAACAGCAACCTTCTCATCGAGTACTTCCGCAATGAGTTTGGGGAGATCCAGGGTGACAAGAGCG
AGATGATCTGGAACCTTCCACTGCTGGGTGGAGTCGTGGATGACCAGGCCGACCTGCAGCCGGGGTACGA
GGGCTGGCAGGCCCTGGACCCAACGCCCCAGGAGAAGAGCGAAGGAACGTACTGCTGTGGCCAGTTCCA
GTTCTGTCATCAAGGAGGGCGACCTGAGCACCAAGTACGATGCGCCCTTTGTCTTTGCGGAGGTCAATG
CCGACGTGGTAGACTGGATCCAGCAGGACGATGGGTCTGTGCACAAATCCATCAACCGTTCCCTGATCGT
TGGGCTGAAGATCAGCACTAAGAGCGTGGGCCGAGACGAGCGGAGGATATCACCACACCTACAAATAC
CCAGAGGGGTCTCAGAGGAGAGGGAGGCCTTACAAAGGGCGAACCACCTGAACAAACTGGCCGAGAAGG
AGGAGACAGGGATGGCCATGCGGATCCGTGTGGGCCAGAGCATGAACATGGGCAGTGACTTTGACGTCTT

TGCCACATCACCAACAACACCGCTGAGGAGTACGTCTGCCGCTCCTGCTCTGTGCCCGCACCGTCAGC
TACAATGGGATCTTGGGGCCCGAGTGTGGCACCAAGTACCTGCTCAACCTAACCTGGAGCCTTTCTCTG
AGAAGAGCGTTCTCTTTGCATCCTCTATGAGAAATACCGTGAAGTACGCTTACGGAGTCCAACCTCATCAA
GGTGGCGGGCCCTCCTCGTGGAGCCAGTTATCAACAGCTACCTGCTGGCTGAGAGGGACCTCTACCTGGAG
AATCCAGAAATCAAGATCCGGATCCTTGGGGAGCCCAAGCAGAAACGCAAGCTGGTGGCTGAGGTGTCCC
TGCAGAACCCGCTCCCTGTGGCCCTGGAAGGCTGCACCTTCACTGTGGAGGGGGCCGGCCTGACTGAGGA
GCAGAAGACGGTGGAGATCCAGACCCCGTGGAGGCAGGGGAGGAAGTTAAGGTGAGAATGGACCTCGTG
CCGCTCCACATGGGCCTCCACAAGCTGGTGGTGAAGTTCGAGAGCGACAAGCTGAAGGCTGTGAAGGGCT
TCCGGAATGTCATCATTGGCCCCGCTAAGGGACCCCTGCTCCCAGCCTGCTGAGAGCCCCACCTTGAT
CCCAATCCTTATCCCAAGCTAGTGAGCAAAATATGCCCTTATTGGGGCCCGAGACCCAGGGCAGGGTGG
GCAGCCTATGGGGGCTCTCGGAAATGGAATGTGCCCTGGCCCATCTCAGCCTCCTGAGCCTGTGGGTCC
CCACTCACCCCTTTGCTGTGAGGAATGCTCTGTGCCAGAAACAGTGGGAGCCCTGACCTGTGCTGACTG
GGGCTGGGGTGAGAGAGGAAAGACCTACATTCCCTCTCCTGCCAGATGCCCTTTGGAAAGCCATTGACC
ACCCACCATATTGTTTGATCTACTTCATAGCTCCTTGGAGCAGGCAAAAAGGGACAGCATGCCCTTGGC
TGGATCAGGAATCCAGCTCCCTAGACTGCATCCCGTACCTCTTCCCATGACTGCACCCAGCTCCAGGGC
CCTTGGGACACCCAGAGCTGGGTGGGACAGTGATAGGCCCAAGTCCCCTCCACATCCAGCAGCCCCAA
GCTTAATAGCCCTCCCCCTCAACCTCACCATTGTGAAGCACCTACTATGTGCTGGGTGCCTCCACACTT
GCTGGGGCTCACGGGGCCCTCAACCCATTTAATCACCATTGGGAACTGTTGTGGGCGCTGCTTCCAGAT
AAGGAGACTGAGGCTTAGAGAGAGGAGGAGCCCCCTCCACACCAGTGGCCTCGTGGTTATAAGCAAGGC
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CAGCCTGACCTGAGACTGTGCGAGAGGCTGTCTGGGGCCTTTATCAAAAAAGACTCAGCCAAGACAAGG
AGGTAGAGAGGGGACTGGGGGACTGGGAGTCAGAGCCCTGGCTGGGTTCAGGTCCCACGTCTGGCCAGCG
ACTGCCTTCTCCTCTCTGGGCCTTTGTTTCCTTGTGGTTCAGAGGAGTGATTGAACCTGCTCATCTCAA
GGATCCTCTCCACTCCATGTTTGAATACACAATTCC

>gi|4759228|ref|NP_004604.1| transglutaminase 2 (C polypeptide, protein-
glutamine-gamma-glutamyltransferase) .[Homo sapiens] (SEQ ID NO:13)
MAEELVLERCDELEETNGRDHHTADLCREKLVVRRGQPFWLTLHFEGRNYSQASVDSLTFVVTGPAPSQE
AGTKARFPLRDAVEEGDWTATVVDQDQDCTLSLQLTTPANAPIGLYRLSLEASTGYQGSSFVLGHFILLFN
AWCPADAVYLDSEERQEYVLTQQGFIYQGSKFINKIPWNFGQFQDGLDILCLILLDVNPKFLKNAGRD
CSRSSPVYVGRVSGMVNNDQGVLLGRWDNNGDGVSPMSWIGSVLDILRRWKNHGCQRVKYQGCWVF
AAVACTVLRLGIPTRVVTNYSNHDQNSNLLIEYFRNEFGEIQDKSEMIWNFHCWVESWMTRPDLPQ
YEGWQALDPTPQEKSEGTGCCPVVRAIKEGDLSTKYDAPFVFAEVNADVVDWIQDDGSVHKSINRSL
IVGLKISTKSVGRDEREDITHYKYPEGSSEEREAFTRANHLNKLAEKEETGMAMRIRVGQSMNMGSDFD
VFAHITNNATAEYVCRLLLCARTVSYNGILKPECAGTKYLLNLTLEPFSEKSVPLCILEKYRDCLTESNL
IKVRALLVEPVINSYLLAERDLYLENPEIKRILGEPKQKRKLVAEVSLLQNPLPVALEGCTFTVEGAGLT
EEQKTVEIPDPVEAGEEVKVRMDLVPLHMLHLKLVVNFESDKLKAVKGFNRNVIIGPA

>gi|13097680|gb|BC003551.1|BC003551 Homo sapiens, Similar to transglutaminase
2 (C polypeptide, protein-glutamine-gamma-glutamyltransferase), clone
MGC:1193 IMAGE:3544757, mRNA, complete cds (SEQ ID NO:14)
CTCCGCCTCGGCAGTGCCAGCCGCAAGTGGTGCACCTTGGAGGGTCTCGCCGCCAGTGGAAGGAGCCACC
GCCCCCGCCCGACCATGGCCGAGGAGCTGGTCTTAGAGAGGTGTGATCTGGAGCTGGAGACCAATGGCCG
AGACCACCACACGGCCGACCTGTGCCGGGAGAAGCTGGTGGTGCACGGGGCCAGCCCTTCTGGCTGACC
CTGCACTTTGAGGGCCGCAACTACGAGGCCAGTGTAGACAGTCTCACCTTCAGTGTCGTGACCGGCCAG
CCCCTAGCCAGGAGGCCGGGACCAAGGCCCGTTTTCCACTAAGAGATGCTGTGGAGGAGGGTGACTGGAC
AGCCACCGTGGTGGACCAGCAAGACTGCACCCTCTCGCTGCAGCTCACCACCCCGGCCAACGCCCCCATC
GGCCTGTATCGCCTCAGCCTGGAGGCCTCCACTGGCTACCAGGGATCCAGCTTTGTGCTGGGCCACTTCA
TTTTGCTCTTCAACGCCTGGTGGCCAGCGGATGCTGTGTACCTGGACTCGGAAGAGGAGCGGCAGGAGTA
TGTCTCACCACAGCAGGGCTTTATCTACCAGGGCTCGGCCAAGTTCATCAAGAACATACCTTGAATTTT
GGGACAGTTTGAAGATGGGATCCTAGACATCTGCCTGATCCTTCTAGATGTCAACCCCAAGTTCCTGAAGA
ACGCCGGCCGTGACTGCTCCCGCCGACGAGCCCCGTACGTGGGCCGGGTGGTGAAGTGGCATGGTCAA

CTGCAACGATGACCAGGGTGTGCTGCTGGGACGCTGGGACAACAACCTACGGGGACGGCGTCAGCCCCATG
TCCTGGATCGGCAGCGTGGACATCCTGCGGCGCTGGAAGAACCACGGCTGCCAGCGCGTCAAGTATGGCC
AGTGCTGGGTCTTCGCCGCCGTGGCCTGCACAGTGTGAGGTGCCTGGGCATCCCTACCCGCGTCGTGAC
CAACTACAACCTCGGCCCCATGACCAGAACAGCAACCTTCTCATCGAGTACTTCCGCAATGAGTTTGGGGAG
ATCCAGGGTGACAAGAGCGAGATGATCTGGAACCTTCCACTGCTGGGTGGAGTCGTGGATGACCCAGGCCGG
ACCTGCAGCCGGGGTACGAGGGCTGGCAGGCCCTGGACCCAACGCCCCAGGAGAAGAGCGAAGGGACGTA
CTGCTGTGGCCCAGTTCCAGTTCGTGCCATCAAGGAGGGCGACCTGAGCACCAGTACGATGCGCCCTTT
GTCTTTGCGGAGGTCAATGCCGACGTGGTAGACTGGATCCAGCAGGACGATGGGTCTGTGCACAAATCCA
TCAACCGTTTCCCTGATCGTTGGGCTGAAGATCAGCACTAAGAGCGTGGGCCGAGACGAGCGGGAGGATAT
CACCCACACCTACAAATACCCAGAGGGGTCTCAGAGGAGAGGGAGGCCTTCACAAGGGCGAACCACCTG
AACAACTGGCCGAGAAGGAGGAGACAGGGATGGCCATGCGGATCCGTGTGGGCCAGAGCATGAACATGG
GCAGTGACTTTGACGTCTTTGCCACATCACCAACAACACCGCTGAGGAGTACGTCTGCCGCCTCCTGCT
CTGTGCCCGCACCGTCAGCTACAATGGGATCTTGGGGCCCCGAGTGTGGCACCAAGTACCTGCTCAACCTC
AACCTGGAGCCTTTCTCTGGTAAAGCCCTGTGTTCTGGAGCATTGTGTGACCGCCAACCTGACAACATGC
TAGGTAGTGACCTAAAAA

>gi|13097681|gb|AAH03551.1|AAH03551 Similar to transglutaminase 2 (C
polypeptide, protein-glutamine-gamma-glutamyltransferase) [Homo sapiens] (SEQ
ID NO:15)

MAEELVLERCDLELETNGRDHHTADLCREKLVRRGQPFWLTTLHFEGRNYESVDSLTFVSVTGPAPSQE
AGTKARFPLRDAVEEGDWTATVVDQDCTLSLQLTTPANAPIGLYRLSLEASTGYQGSSFVLGHFILLFN
AWCPADAVYLDSEERQEYVLTQQGFIYQGSAKFIKNIWNFGQFEDGILDICLILLDVNPKFLKNAGRD
CSRRSSPVYVGRVSGMVNCDNDQGVLLGRWDNNYGDGVSMSWIGSVDILRRWKNHGCQRVKYQGCWVF
AAVACTVLRCLGIPTRVVTNYSNHDQNSNLLIEYFRNEFGEIQDKSEMIWNFHCWVESWMTRPDLQPG
YEGWQALDPTPQEKSEGTYYCCGPVPVRAIKEGDLSTKYDAPFVFAEVNADVVDWIQQDDGSVHKSINRSL
IVGLKISTKSVGRDEREDITHYKYPEGSSSEEREAFTNHLNKLAEKEETGMAMRIRVGQSMNMGSDFD
VFAHITNNTAEYVCRLLLCARTVSYNGILGPECCKYLLNLNLEPFSGKALCSWSIC

>gi|339577|gb|M98478.1|HUMTGH1A Human transglutaminase mRNA, complete cds
(SEQ ID NO:16)

CAGGCGTGACGCCAGTTCTAAATCTTGAACAGAACAAAACCTTCAAAGTACACCAAAATAGAACCTCCTT
AAAGCATAAAATCTACGGAGGGTCTCGCCGCCAGTGGAAGGAGCCACCGCCCCGCCGACCATGGCCGA
GGAGCTGGTCTTAGAGAGGTGTGATCTGGAGCTGGAGACCAATGGCCGAGACCACACACGGCCGCACTG
TGCCGGGAGAAGCTGGTGGTGCGACGGGGCAGCCCTTCTGGCTGACCCTGCACCTTTGAGGGCCGCAACT
ACGAGGCCAGTGTAGACAGTCTCACCTTCAGTGTCTGACCGGCCAGCCCTAGCCAGGAGGCCGGGAC
CAAGGCCCGTTTTTCCACTAAGAGATGCTGTGGAGGAGGGTGAAGTGGACAGCCACCGTGGTGGACAGCAA
GACTGCACCTCTCGCTGCAGCTCACCACCCCGGCCAACGCCCCCATCGGCCTGTATCGCCTCAGCCTGG
AGGCCTCCACTGGCTACCAGGGATCCAGCTTTGTGCTGGGCCACTTCATTTTGTCTCTTCAACGCCTGGTG
CCCAGCGGATGCTGTGTACCTGGACTCGGAAGAGGAGCGGCAGGAGTATGTCCTACCCAGCAGGGCTTT
ATCTACCAGGGCTCGGCCAAGTTCATCAAGAACATACCTTGAATTTTGGGCAGTTTGAAGATGGGATCC
TAGACATCTGCCTGATCCTTCTAGATGTCAACCCCAAGTTCCTGAAGAACGCCGCGCTGACTGCTCCCG
CCGCAGCAGCCCCGTCTACGTGGGCGGGTGTGGAGTGGCATGGTCAACTGCAACGATGACCAGGGTGTG
CTGCTGGGACGCTGGGACAACAACCTACGGGGACGGCGTCAGCCCCATGTCCTGGATCGGCAGCGTGGACA
TCCTGCGGCGCTGGAAGAACCACGGCTGCCAGCGCGTCAAGTATGGCCAGTGTGGGTCTTCGCCGCCGT
GGCCTGCACAGTGTGAGGTGCCTGGGCATCCCTACCCGCGTCGTGACCAACTACAACCTCGGCCCCATGAC
CAGAACAGCAACCTTCTCATCGAGTACTTCCGCAATGAGTTTGGGGAGATCCAGGGTGACAAGAGCGAGA
TGATCTGGAACCTTCCACTGCTGGGTGGAGTCGTGGATGACCAGGCCGGACCTGCAGCCGGGGTACGAGGG
CTGGCAGGCCCTGGACCCAACGCCCCAGGAGAAGAGCGAAGGGACGTAAGTGTGTGGCCAGTTCCAGTT
CGTGCCATCAAGGAGGGCGACCTGAGCACCAGTACGATGCGCCCTTTGTCTTTGCGGAGGTCAATGCCG
ACGTGGTAGACTGGATCCAGCAGGACGATGGGTCTGTGCACAAATCCATCAACCGTTCCCTGATCGTTGG
GCTGAAGATCAGCACTAAGAGCGTGGGCCGAGACGAGCGGGAGGATATCACCCACACCTACAAATACCCA
GAGGGGTCTCAGAGGAGAGGGAGGCCTTACAAGGGCGAACCACCTGAACAACTGGCCGAGAAGGAGG

AGACAGGGATGGCCATGCGGATCCGTGTGGGCCAGAGCATGAACATGGGCAGTGACTTTGACGTCTTTGC
CCACATCACCAACAACACCGCTGAGGAGTACGTCTGCCGCCCTCCTGCTCTGTGCCCCGACCGTCAGCTAC
AATGGGATCTTGGGGCCCCGAGTGTGGCACCAAGTACCTGCTCAACCTCAACCTGGAGCCTTTCTCTGGTA
AAGCCCTGTGTTCCCTGGAGCATTTGTTGACCGCCAACCTGACAACATGCTAGGTAGTGACCTAACCACCTTA
GCATGTGTGATTTACCCACAGACACTTACATGGCGCTGACTCTGGGGCAGGCCCTGTCCTAAGCACTT
TATAAATATCAACCCACTTA

>gi|339578|gb|AAA36739.1| transglutaminase (SEQ ID NO:17)
MAEELVLERCDLELETNGRDHHTADLCREKLVRRGQPFWLT LHFEGRN YEASVDSLTF SVVTGPAPSQE
AGTKARFPLRDAVEEGDWTATVVDQQDCTLSLQLTTPANAPIGLYRLSLEASTGYQGSSFVLGHFILLFN
AWCPADAVYLDSEERQEYVLTQQGFIYQGS AKFIKNI PWNFGQFEDGILDICLILLDVNPKFLKNAGRD
CSRSSPVYVGRVWSGMVNNDQGVLLGRWDNNYGDGVSPMSWIGSV DILRRWKNHGCQRVKYQGCWVF
AAVACTVLRCLGIPTRVVTNYSAHQNSNLLIEYFRNEFGEIQGDKSEMIWNFHCWVESWMT RPDLPQ
YEGWQALDPTPQEKSEGT YCCGPVPVRAIKEGDLSTKYDAPFVFAEVNADVVDWIQQDDGSVHKSINRSL
IVGLKISTKSVGRDEREDITHYKYPEGSS EEREAFT RANHLNKLAEKEETGMAMRI RVGQSMNMGSDFD
VFAHITNNTAE EYVCRLLLCARTVSYNGILGPECGTKYLLNLNLEPFS GKALCSWSIC

Cytosine deaminase

GH1-27-PCR-G3F1 (SEQ ID NO:18)
CCAGCGGTGGCTCCAGTGTGCTGGTCTGCGGACGTGTGCCATGCGGAGCTGAATGCCATCATGAACAAAAATTCGAC
CGATGTGAAAGGCTGTAGTATGTATGTTGCCTTGTTCCCTTGTAATGAATGCGCTAAGCTCATCATCCAGGCAGGTA
TAAAAGAAGTGATTTTCTGTTTTGATAAATACCATGATAGTGACGAGGCAACTGCTGCGAGGCTCCTGTTTAATAT
GGCCGGGTGACATTCCGGAAATTCATACCGAAGTGCAGCAAGATTGTCATTGACTTTGATTCAATTAACAGCAGAC
CGAGTCAAAAGCTTCAGTGAGTTACATCTCATTCAATCTCCAGAAGATTGGGATTATCGTCTTCTAAGAGGTTGCTA
ATGCCTTTCATCTTGAAGTTACACATAACTTCTTACTAGCCAGTATGGCAAAGTAGGCATCTTAAGAATATAAAGC
CTCCAATCTTCCTTACTGTCTCTCTTGTGCATGGAATCTACATGTGTTTGAAC TATTGCTTTAGGGATTTAAAATA
GGGGAGCCTGTGGTGGCCTGGTGCACAGGGGCTAGAACGAGAGTGCCTCCCCTTCTTGTGTCCTGGCTGGCTGGGAT
GCTGTGGCTCTTCAGAGGAGCATCAGCCTGTCTGTCTGCTGCGATCCGGCAG

>gi|23503055|sp|P32321|DCTD_HUMAN Deoxycytidylate deaminase (dCMP deaminase)
(SEQ ID NO:19)
MSEVSCKKRDDYLEWPEYFMAVAFLSAQRSKDPNSQVGACIVNSENKIVGIGYNGMPNGCSDDVLPWRRRT
AENKLDTKYPYVCHAE LNAIMNKNSTDVKGCSMYVALFPCNECAKLIIQAGIKEVIFMSDKYHDSDEATA
ARLLFN MAGVTRKFI PKCSKIVIDFDSINSRPSQKLQ

>gi|4503276|ref|NM_001921.1| Homo sapiens dCMP deaminase (DCTD), mRNA (SEQ ID:
NO:20)
ATGAGTGAAAGTTTCTGCAAGAAACGGGACGACTATTTGGAATGGCCAGAGTATTTTATGGCTGTGGCCT
TCTTATCAGCACAGAGAAGCAAAGATCCAAATCCCAGGTCGGCGCCTGCATCGTGAATTCAGAAAACAA
GATTGTGCGGATTGGGTACAATGGGATGCCAAATGGGTGCAGTGATGACGTGTGCCTTGGAGAAGGACA
GCAGAGAATAAGCTGGACACCAAATACCCGTACGTGTGCCATGCGGAGCTGAATGCCATCATGAACAAAA
ATTCGACCGATGTGAAAGGCTGTAGTATGTATGTCGCCTTGTTCCCTTGTAATGAATGCGCTAAGCTCAT
CATCCAGGCAGGTATAAAAGAAGTGATTTTCACGTCTGATAAATACCATGATAGTGACGAGGCAACTGCT
GCGAGGCTCCTGTTTAATATGGCCGGGTGACATTCCGGAAATTCATACCGAAGTGCAGCAAGATTGTCA
TTGACTTTGATTCAATTAACAGCAGACCGAGTCAAAAGCTTCAGTGAGTTACATCTCATTCAATCTCCAG
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TAGCCAGTATGGCAAAGTAGGCATCTAAAGAATATAAAGCCTCAAATCTTCCTTACTGTCTCTCTTGTG
ACATGGAATCTACATGTGTTTGAAC TATTGCTTTAGGATTTAAAATAGGGGAGCCTGTGGTGGCCTGGTG
CACAGGGCTAGAACGAGAGTGCCCTCCCCTTCTTGTGTCCTGGCTGGCTGGGATGCTGGTGGCTCTTCAGA
GGAGCATCAGCTGTCTGTCTGCTGCGATCCGGCAGCCTCTCTTCACTGCTACATGTGCTGGAAGGAC
AAATAAAATAATTGTGGTTGTGTTCTTAATGGGGACGAGCAGACACACTGATCTGAACATCTGGCCCAAGT

GAAGCATGGCATATAGTGCCCTTGGAAGAAAATTAGGCCTCAAATGACAGTAGCATTGAAGTGTGCTG
CAGAGTTGAGGGAACCCCCAGCCACCCTCCCGGAATCCGAGATAGGGTGGCACATCTGTCTGACAGAC
GAGGAGTGAACCTGAACCAGGAATATTCTCCATTCTGCTCTCCCACTGCACACAGGGTGGTGGCACA
TTATCCCTCTGGGGGGTGGGGACGCCTGTTGTTTTGGCTCAATTTGGGTTTGTGGTGCATGGAGCTCT
TCCATTTCTGTTTAGCTGAATAATGAGTTGTTCTTAGAGGAGACAGCCTGTCTCTCCTTGTGCCCCAAA
GCCCATGCCCTGCCGTGGTGGCAGCTGGGGCTGTGGATGGGAGGGGTCCCCAACATGGATGTGTTGCCCC
TCCTCCGCATGCCAACGCAGTTCATGTACAAGGCCCTCTGCAACTGGAGAGAAAATTAATTCCTATCCC
GTGAGTGGATTGTGAGAAATCCACCCACGTGGAGACAGCTTACTGCAGCACTGTTGGTGTTCGGAGCTC
TTCTGTGCCCTGGCTCCATGCTTTCACCTACACAAGCATCACCTTCCTAATCACCGCGGGGCGGGGAGCG
TGTGGCTGTGCCCCCTTCTCTTAATCTCATTTAATTTTTATTAAACATGCTCAGTACCTGTGTTGAGAAA
AGGCTTTCTTTATCCTAAAGATTATTACCTTTTTTAAAGTGCTCTTATATTTTCATGAGTTTTTATTTGT
CTCTGAGATTTGTATTCCACATTCTAGGGTATTCTGTAATTTGGCTCCTTACCAATATTATTAAATCT
TATTAATCT

>gi|4503277|ref|NP_001912.1| dCMP deaminase [Homo sapiens] (SEQ ID NO:21)
MSEVSKKRDDYLEWPEYFMAVAFLSAQRSKDPNSQVGACIVNSENKIVGIGYNGMPNGCSDVLPWRRRT
AENKLDTKYPYVCHAEINAIMNKNSTDVKGCSMYVALFPCNECAKLIIQAGIKEVIFTSDKYHDSDEATA
ARLLFNMAGVTFRKFIKCSKIVIDFDSINSRPSQKLQ

Peptidase M41 (Paraplegin)

GH1-40-PCR-G3F1 (SEQ ID NO:22)
GTGGAAATGCCCTGTTACTCTGTGGGGATGACGGCAGTGGGCCTGGCCATCCTGTGGTATGTTTTCCGTCTGGCCGG
GATGACTGGAAGGGAAGGTGGATTCACTGCTTTTAATCAGCTTAAATGGCTCGTTTCACCATTTGTGGATTGGAAGA
TGGGGAAAGGGAGTCAGCTTCAAAGACGTGGCAGGAATGCACGAAGCCAACTGGAAGTCCGCGAGTTTGTGGATTA
TCTGAAGAGCCCAGAACGCTTCCCTCCAGCTTGGCGCCAGGTCCCAAAGGGCGCACTGCTGCTCGGCCCCCCCCGGCTG
TGGGAAGACGCTTCTGGCCAAGGCGGTGGCCACGGAGGCTCAGGTGCCCTTCCCTGGCGATGCCGGCCCCAGAGTTCTGT
GGAGGTCATTGGAGGCCTCGGCGCTCCCGTGTGCGGAGCCTCTTTAAGGAAGCCCGAGCCCCGGGCCCCCTGCATCGT
CTACATCGATAGATCGACGCGGTGGGCAAGAAGCGCTCCACCACCATGTCCGGCTTCTCCAACACNGAGGAGGAGCA
GACGCTCAACCAGCTTCTGGTNAGAAATGGATGGAATGGGTACCACAGACCATGTCTATCGTCTCGGCGTCCACGAA
ACCGAGCTGACATTTTGGACGGTGTCTTTATAGGCCAGGCCGAAGTGGGACCGGGACGTCTTCTTTGATCTC

>gi|4507172|ref|NM_003119.1| Homo sapiens spastic paraplegia 7, paraplegin
(pure and complicated autosomal recessive) (SPG7), mRNA (SEQ ID NO:23)
TTTCAGGCCAACATGGCCGTGCTGCTGCTGCTGCTCCGTGCCCTCCGCCGGGGTCCAGGCCCGGGTCTCTC
GGCCGCTGTGGGGCCCAGGCCCGGCCTGGAGTCCAGGGTTCCCGCCAGGCCCGGGAGGGGGCGGCCGTA
CATGGCCAGCAGGCCTCCGGGGACCTCGCCGAGGCTGGAGGCCGAGCTCTGCAGAGCTTACAATTGAGA
CTGCTAACCCTACCTTTGAAGGGATCAACGGATTGTTGTTGAAACAACATTTAGTTTCAAGATCCAGTCA
GACTCTGGCAACTTTTAGGTGGTACTTTCTATTTTAACACCTCAAGGTTGAAGCAGAAGAATAAGGAGAA
GGATAAGTCGAAGGGGAAGGCGCCTGAAGAGGACGAAGAGGAGAGGAGACGCCGTGAGCGGGACGACCAG
ATGTACCGAGAGCGGCTGCGCACCTTGCTGGTTCATCGCGGTTGTCTATGAGCCTCCTGAATGCTCTCAGCA
CCAGCGGAGGCAGCATTTCTGGAACGACTTTGTCCACGAGATGCTGGCCAAGGGCGAGGTGCAGCGCGT
CCAGGTGGTGCCTGAGAGCGACGTGGTGAAGTCTACCTGCACCTGGAGCCGTGGTGTGTTGGGCGGCCT
CGGCTAGCCTTGATGTACCGAATGCAGGTTGCAAATATTGACAAGTTTGAAGAGAAGCTTCGAGCAGCTG
AAGATGAGCTGAATATCGAGGCCAAGGACAGGATCCCAGTTTCTTACAAGCGAACAGGATTCTTTGGA
TGCCCTGTACTCTGTGGGGATGACGGCAGTGGGCCTGGCCATCCTGTGGTATGTTTTCCGTCTGGCCGGG
ATGACTGGAAGGGAAGGTGGATTCACTGCTTTTAATCAGCTTAAATGGCTCGTTTCACCATTTGTGGATG
GGAAGATGGGGAAAGGAGTCAGCTTCAAAGACGTGGCAGGAATGCACGAAGCCAACTGGAAGTCCGCGA
GTTTGTGGATTATCTGAAGAGCCCAGAACGCTTCCCTCCAGCTTGGCGCCAAGGTCCCAAAGGGCGCACTG
CTGCTCGGCCCCCCCCGGCTGTGGGAAGACGCTGCTGGCCAAGGCGGTGGCCACGGAGGCTCAGGTGCCCT
TCCTGGCGATGGCCGGCCAGAGTTCTGTGGAGGTCATTGGAGGCCTCGGCGCTGCCCGTGTGCGGAGCCT
CTTTAAGGAAGCCCGAGCCCGGGCCCCCTGCATCGTCTACATCGATGAGATCGACGCGGTGGGCAAGAAG

CGCTCCACCACCATGTCCGGCTTCTCCAACACGGAGGAGGAGCAGACGCTCAACCAGCTTCTGGTAGAAA
TGGATGGAATGGGTACCACAGACCATGTTCATCGTCTGGCGTCCACGAACCGAGCTGACATTTTGGACGG
TGCTCTGATGAGGCCAGGCCGACTGGACCGGCACGTCTTCATTGATCTCCCCACGCTGCAGGAGAGGCGG
GAGATTTTTGAGCAGCACCTGAAGAGCCTGAAGCTGACCCAGTCCAGCACCTTTTACTCCCAGCGTCTGG
CAGAGCTGACACCAGGATTCACTGGGGCTGACATCGCCAACATCTGCAATGAGGCTGCGCTGCACGCGGC
GCGGGAGGGACACACTTCCGTGCACACTCTCAACTTCGAGTACGCCGTGGAGCGCGTCTCGCAGGGACT
GCCAAAAGAGCAAGATCCTGTCCAAGGAAGAAGCAAGAGTGGTTGCGTTTCATGAGTCGGGCCACGCCT
TGGTGGGCTGGATGCTGGAGCACACGGAGGCCGTGATGAAGGTCTCCATAACCCCTCGGACAAACGCCGC
CCTGGGCTTTGCTCAGATGCTCCCCAGAGACCAGCACCTCTTACCAAGGAGCAGCTGTTTGAGCGGATG
TGCATGGCCTTGGGAGGACGGGCCTCGGAAGCACTGTCCTTCAACGAGGTCACTTCTGGGGCACAGGACG
ACCTGAGGAAGGTCACCCGCATCGCCTACTCCATGGTGAAGCAGTTTGGGATGGCACCTGGCATCGGGCC
CATCTCCTTCCCTGAGGCGCAGGAGGGCCTCATGGGCATCGGGCGGGCGCCCTTACGCCAAGGCCTGCAG
CAGATGATGGACCATGAAGCAAGACTGCTGGTGGCCAAGGCCTACAGACACACCGAGAAGGTGCTGCAGG
ACAACCTGGACAAGTTGCAGGCGCTGGCAAACGCCCTTCTGGAAAAGGAAGTGATAAACTATGAGGACAT
TGAGGCTCTCATTGGCCCGCCGCCCATGGGCCGAAGAAAATGATCGCACCCGAGAGGTGGATCGACGCC
CAGAGGGAGAAACAGGACTTGGGCGAGGAGGAGACCGAAGAGACCCAGCAGCCTCCACTTGGAGGCGAAG
AGCCGACTTGGCCCAAGTAGTTGGGAGGTGTTGGCTGCACGTGCGGGTGGTCCGGGAAGTGAGGGCTCAC
TCAGCCACCTGAGTTGCTTTTTCAGCTGAGGTTTGCACCTTCTCTCGCGGCCCTCAGTAGTCCCTGCACA
GTGACTTCTGAGATCTGTTGATTGATGACCCTTTTCATGATTTTAAGTTTCTCTGCAGAAACTACTGACG
GAGTCTGTGTTTGTGAGTCGTTTCCCTATGGGGAAGGTTATCAGTGCTTCCCGAGTGAGCATGGAACA
CTTCGAGTTCCCAGGGTTATAGACAGTCGTTCCAGTGTTGGCTGAGGCCACCCAGAGGCAGCAGAGCATT
CAGACTCCAAACAGACCCCTGTTTCATGCCGACGCTTGACGACCGCCCCAGTTCTGTGGCTCCCTCGGA
ATGCTAAGGGGATCGGACATGAAAGGACCCTGTGAGCCGATTGTCTATCTCCAGCGGCCCTGTCTATCCA
GCTCACTCATCAATGGGGCCAGTCAGGCCAGGCACTGGGCTCCGGAGGACTCACCCTGCCCCCTGCTG
CCATGTGGACTGGTGAAGTTGAGGACTTCTTGTGCTGCTAGTCACGCATGCAGTGTTGGGGATGCCTTG
GTTTTTACTGCTCTGAGAATTGTTGAGATACTTTACTAATAAACTGTGTAGTTGGAAAAA
AAAAAA

>gi|4507173|ref|NP_003110.1| paraplegin [Homo sapiens] (SEQ ID NO:24)
MAVLLLLLRALRRPGPGPRPLWGPWSPGFPARPGRGRPYMASRPPGDLAEAGGRALQSLQLRLLLTP
TFEGINGLLLKQHLVQNPVRLWQLLGGTFYFNTSRLKQKNKEKDKSKGKAPEEDEEERRRRERDDQMYRE
RLRLLVIAVMSLLNALSTSGGSISWNDFVHEMLAKGEVQVRVQVPESDVVEVYLHPGAVVFGPRRLAL
MYRMQVANIDKFEEKLRAAEDELNIEAKDRIPVSYKRTGFFGNALYSVGMTAVGLAILWYVFRLAGMTGR
EGGFSAFNQLKMARFTIVDGKMGKGVSKFDVAGMHAEKLEVFVDYLSKPERFLQLGAKVPKGALLLGP
PGCGKTLAKAVATEAQVPFLAMAGPEFVEVIGGLGAARVRSLFKEARARAPCIVYIDEIDAVGKKRSTT
MSGFSNTEEEQTLNQLLVEMDGMGTTDHVIVLASTNRADILDGALMRPGRLDHRVFDLPTLQERREIFE
QHLKSLKLTQSSTFYSQRLAELTPGFSGADIANICNEAALHAAREGHTSVHTLNFEYAVERVLAGTAKKS
KILSKEEQKVAFHESGHALVGWMLEHTEAVMKVSITPRNTAALGFAQMLPRDQHLFTKEQLFERMCMAL
GGRASEALSFNEVTSGAQDDLKRVTRIAYSMVKQFGMAPGIGPISFPEAQEGLMGIGRRPFSQGLQQMMD
HEARLLVAKAYRHTEKVLQDNLQALANALLEKEVINYEDIEALIGPPPHGPKKMIAPQRWIDAQREK
QDLGEEETEETQQPPLGGEEPTWPK

CD13 Aminopeptidase

GH1-72-PCR-G3F1 (SEQ ID NO:25)
AGGCCAGGCCTAGGGCGGGGTTGGCATGAGCGGGCAGCGCGCTGGGAGGTGCTCAGGCAGCCTGGGTTCATCAGGAAC
TAGACTGGCTCACAGGCAGAGAGAACGTGGGCTGGAGACTTTGTCTTGGAGGGAGGACACTGGTGCCTCGGGCTCC
AGGAATGGAGGCCCTGCACCAGCCGCTGGGATGGACACATGTGGGCACCTTGATGGGGGCCGGGTGACTTCAAGGG
CTGGGACTATTTGCTGTTTTCTGTGAACCACTGGAGCACCACTCCTTGTCTCTCTTACCCACTTATGTTGCTTT
CGTCTTCTCAGGGGCTTGCTCCAGGGCCCGGGTGCCTTAGCCGAAGCCTGTTTCTCTGTTTCTCT

>gi|113743|sp|P15144|AMPN_HUMAN Aminopeptidase N (Microsomal aminopeptidase) (GP150) (Myeloid plasma membrane glycoprotein CD13) (SEQ ID NO:26)
MAKGFYISKSLGILGILLGVAAVCTIIALSVVYSQEKKNANSSPVASTTPSASATTNPASATTLQDQSKA
WNRRLPNTLKPDSYQVTLRPYLTPNDRGLYVFKGSSTVRFTCKEATDVIIHSHKKNLNTLSQGHRVVL
GVGGSQPPDIDKTELVEPTEYLVLVHLKGSVLKDSQYEMDSEFEGELADDLAGFYRSEYMEGNVRKVVATT
QMQAADARKSFPCFDEPAMKAEFNITLIHPKDLTALSNNMLPKGPSTPLPEDPNWNVTEFHTTPKMSTYLL
AFIVSEFDYVEKQASNGVLIRIWARPSAIAAGHGDIYALNVTGPILNFFAGHYDTPYPLPKSDQIGLPDFN
AGAMENWGLVTYRENSLLFDPLSSSSSNKERVVTVIAHELAHQWFGNLVTIEWWNLWLNNEGFASYVEYL
GADYAEPTWNLKDLMLVNDVYRVMVDALASSHPLSTPASEINTPAQISELFDALISYSGASVLRMLSSF
LSEDVFKQGLASYLHTFAYQNTIYLNLDLHLEAVNNRSIQLPTTERDIMNRWTLQMGFPVITVDTSTGT
LSQEHFLLDPSNVTRPSEFNIVVIVPITSIRDGRQQDYWLMDVRAQNDLFSTSGNEWVLLNLNVTGYY
RVNYDEENWRKIQTQLQRDHSAPVINRAQIINDAFNLASAHKVPVTLALNNTLFLIEERQYMPWEAALS
SLSYFKLMFDRSEVYGPMMKNYLKKQVTPFLFIHFRNNTNNWREIPENLMDQYSEVNAISTACSNVPECEE
MVSGLFKQWMENPNNNPIHPNLRSTVYCNAIAQGGEEDWFAWEQFRNATLVNEADKLRAALACSKELWI
LNRYSYTLNPDILRKQDATSTIISITNNVIGQLVWDFVQSNWKKPFNDYGGGSFSFNLIAQVTRRFS
TEYELQQLEQFKDNEETGFGSGTRALEQALEKTKANIKWVKENKEVVLQWFTENSK

>gi|4502094|ref|NM_001150.1| Homo sapiens alanyl (membrane) aminopeptidase (aminopeptidase N, aminopeptidase M, microsomal aminopeptidase, CD13, p150) (ANPEP), mRNA (SEQ ID NO:27)

TAATTTTGGCCAGTCTGCCTGTTGTGGGGCTCCTCCCCTTTGGGGATATAAGCCCGGCTGGGGCTGCT
CCGTTCTCTGCCTGGCCTGAGGCTCCCTGAGCCGCTCCCCACCATCACCATGGCCAAGGGCTTCTATAT
TTCCAAGTCCCTGGGCATCCTGGGGATCCTCCTGGGCGTGGCAGCCGTGTGCACAATCATCGCACTGTCA
GTGGTGTACTCCCAGGAGAAGAACAAGAACGCCAACAGCTCCCCCGTGGCCTCCACCACCCCGTCCGCCT
CAGCCACCACCAACCCCGCTCGGCCACCACCTTGGACCAAGTAAAGCGTGGAATCGTTACCGCTCCC
CAACACGCTGAAACCCGATTCTACCAGGTGACGCTGAGACCGTACCTCACCCCAATGACAGGGGCTG
TACGTTTTTAAGGGCTCCAGCACCGTCCGTTTTCACCTGCAAGGAGGCCACTGACGTCATCATCATCCACA
GCAAGAAGCTCAACTACACCCTCAGCCAGGGGCACAGGGTGGTCCTGCGTGGTGTGGGAGGCTCCCAGCC
CCCCGACATTGACAAGACTGAGCTGGTGGAGCCCACCGAGTACCTGGTGGTGCACCTCAAGGGCTCCCTG
GTGAAGGACAGCCAGTATGAGATGGACAGCGAGTTCGAGGGGGAGTTGGCAGATGACCTGGCGGGCTTCT
ACCGCAGCGAGTACATGGAGGGCAATGTGAGAAAGGTGGTGGCCACTACACAGATGCAGGCTGCAGATGC
CCGGAAGTCCCTTCCCATGCTTCGATGAGCCGGCCATGAAGGCCGAGTTCAACATCACGCTTATCCACCCC
AAGGACCTGACAGCCCTGTCACACATGCTTCCCAAGGTCCCAAGCTCCAGCACCCCACTTCCAGAAGACCCCACT
GGAATGTCTAGTGAAGTCCACACACGCCCCAAGTGTCCAGTACTTGCTGGCCTTCATTGTGACGTGAGTT
CGACTACGTGGAGAAGCAGGCATCCAATGGTGTCTTGATCCGGATCTGGGCCCCGGCCAGTGCCATTGCG
GCGGGCCACGGCGATTATGCCCTGAACGTGACGGGCCCCATCCTTAACTTCTTTGCTGGTCATTATGACA
CACCTACCCACTCCCAAAATCAGACCAGATTGGCCTGCCAGACTTCAACGCCGGCGCCATGGAGAAGT
GGGACTGGTGACCTACCGGGAGAACTCCCTGCTGTTGACCCCCCTGTCTCTCCAGCAGCAACAAGGAG
CGGGTGGTCACTGTGATTGCTCATGAGCTGGCCCCACCGTGGTTCGGGAACCTGGTGACCATAGAGTGGT
GGAATGACCTGTGGCTGAACGAGGGCTTCGCTCCTACGTGGAGTACCTGGGTGCTGACTATGCGGAGCC
CACCTGGAACCTGAAAGACCTCATGGTGTGTAATGATGTGTACCGCGTGATGGCAGTGGATGCACTGGCC
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GCAGGGCCTGGCGTCTACCTCCACACCTTTGCCTACCAGAACACCATCTACCTGAACCTGTGGGACCAC
CTGCAGGAGGCTGTGAACAACCGGTCCATCCAACCTCCCCACCACCGTGCGGGACATCATGAACCGCTGGA
CCCTGCAGATGGGCTTCCCGGTATCACGGTGGATACCAGCACGGGGACCCTTTCCAGGAGCACTTCTCT
CCTTGACCCCGATTCCAATGTTACCCGCCCTCAGAATTCAACTACGTGTGGATTGTGCCCATCACATCC
ATCAGAGATGGCAGACAGCAGCAGGACTACTGGCTGATAGATGTAAGAGCCCAGAACGATCTCTTACGCA
CATCAGGCAATGAGTGGGTCTGCTGAACCTCAATGTGACGGGCTATTACCGGTGAACTACGACGAAGA
GAACTGGAGGAAGATTCACTCAGCTGCAGAGAGACCACTCGGCCATCCCTGTCTCATCAATCGGGCACAG
ATCATTAAATGACGCCTTCAACCTGGCCAGTGCCCATAAAGTCCCTGTCACTCTGGCGCTGAACAACACCC
TCTTCTGATTGAAGAGAGACAGTACATGCCCTGGGAGGCCGCCCTGAGCAGCCTGAGCTACTTCAAGCT

CATGTTTGACCGCTCCGAGGTCTATGGCCCCATGAAGAACTACCTGAAGAAGCAGGTACACCCCCTCTTC
ATTCACCTTCAGAAATAATACCAACAACCTGGAGGGAGATCCCAGAAAACCTGATGGACCAGTACAGCGAGG
TTAATGCCATCAGCACCGCCTGCTCCAACGGAGTTCAGAGTGTGAGGAGATGGTCTCTGGCCTTTTCAA
GCAGTGGATGGAGAACCCCAATAATAACCCGATCCACCCCAACCTGCGGTCCACCGTCTACTGCAACGCT
ATCGCCCAGGGCGGGGAGGAGGAGTGGGACTTCGCCTGGGAGCAGTTCGAAATGCCACACTGGTCAATG
AGGCTGACAAGCTCCGGGCAGCCCTGGCCTGCAGCAAAGAGTTGTGGATCCTGAACAGGTACCTGAGCTA
CACCTGAACCCGGACTTAATCCGGAAGCAGGACGCCACCTCTACCATCATCAGCATTACCAACAACGTC
ATTGGGCAAGGTCTGGTCTGGGACTTTGTCCAGAGCAACTGGAAGAAGCTTTTTAACGATTATGGTGGTG
GCTCGTTCTCCTTCTCCAACCTCATCCAGGCAGTGACACGACGATTCTCCACCGAGTATGAGCTGCAGCA
GCTGGAGCAGTTCAAGAAGGACAACGAGGAAACAGGCTTCGGCTCAGGCACCCGGGCCCCTGGAGCAAGCC
CTGGAGAAGACGAAAGCCAACATCAAGTGGGTGAAGGAGAACAAGGAGGTGGTGTCTCCAGTGGTTTACAG
AAAACAGCAAATAGTCCCCAGCCCTTGAAGTCACCCGGCCCCGATGCAAGGTGCCACATGTGTCCATCC
CAGCGGCTGGTGCAGGGCCTCCATTCTGGAGCCCGAGGCACCAAGTGTCTCCCTCAAGGACAAAGTCT
CCAGCCCACGTTCTCTCTGCCTGTGAGCCAGTCTAGTTCCTGATGACCCAGGCTGCCTGAGCACCTCCCA
GCCCCTGCCCCCTCATGCCAACCCCGCCCTAGGCCTGGCATGGCACCTGTGCCCCAGTGCCTGGGGCTGA
TCTCAGGGAAGCCAGCTCCAGGGCCAGATGAGCAGAAGCTCTCGATGGACAATGAACGGCCTTGCTGGG
GGCCGCCCTGTACCCTCTTTCACCTTTCCTAAAGACCCCTAAATCTGAGGAATCAACAGGGCAGCAGATC
TGTATATTTTTTCTAAGAGAAAATGTAAATAAAGGATTTCTAGATGAAAAAAAAAAAAAAAAAAAA

>gi|4502095|ref|NP_001141.1| membrane alanine aminopeptidase precursor;
microsomal aminopeptidase; Alanyl (membrane) aminopeptidase (aminopeptidase
N, aminopeptidase M, [Homo sapiens] (SEQ ID NO:28)

MAKGFYISKSLGILGILLGVAAVCTIIIALSVVYSQEKNNANSSPVASTTPSASATTNPASATTLDDQSKA
WNRRLPNTLKPDSYQVTLRPYLTPNDRGLYVFKGSSTVRFTCKEATDVIIHSHKLNLYTLSSQHRVVL
GVGGSQPPDIDKTELVEPTEYLVVHLKGSVLKDSQYEMDSEFEGELADDLAGFYRSEYMEGNVRKVATT
QMQAADARKSFPCFDEPAMKAEFNITLIHPKDLTALSNMLPKGPSTPLPEDPNWNVTEFHTTPKMSTYLL
AFIVSEFDYVEKQASNGVLIRIWARPSAIAAGHGDIYALNVTGPILNFFAGHYDTPYPLPKSDQIGLPDFN
AGAMENWGLVITYRENSLLFDPLSSSSSNKERVVTVIAHELAHQWFGNLVTIEWWNLWLNEGFAASYVEYL
GADYAEPTWNLKDLMLVNDVYRMAVDALASSHPLSTPASEINTPAQISELFDIAISYSGASVLRMLSSF
LSEDFVKQGLASYLHTFAYQNTIYLNLDHLEAVNNRSIQLPPTVRDIMNRWTLQMGFPVITVDTSTGT
LSQEHFLDPDSNVTRPSEFNYYVWIVPITSIRDGRQQDYWLIDVRAQNDLFSTSGNEWVLLNLNVTGY
RVNYDEENWRKIQTQLQRDHSAPVINRAQIINDAFNLASAHKVPVTLALNNTLFLIEERQYMPWEAALS
SLSYFKLMFDRSEVYGPKNYLKKQVTPLFIFHRNNTNNWREIPENLMDQYSEVNAISTACSNVPECEE
MVSGLFKQWMENPNNNIHPNLRSTVYCNAIAGGEEEDFAWEQFRNATLVNEADKLRAALACSKELWI
LNRYLSYTLNPDILRKQDATSTIISITNNVIGQLVWDFVQSNWKKLFNDYGGGSFSSFLIQAATRRFS
TEYELQQLQFKKDNEETGFGSGTRALEQALEKTKANIKWVKENKEVVLQWFTENSK

PRK-1

GH1-54-PCR-G3F1 (SEQ ID NO:29)

TCCTTTCCCGCCACGCACTACAGCACCTGTTGCAAGCCCGCGCCGCTCACAGGGACCCTGAGGTACGAGTGGTGGG
CTGCAGAGACCTCCCAGAGACCATCCCGTGAACCTACCCCTCAATGGGGGACCTGGGACCCAGACAGCGCCC
CCCTTCCTGAGCCGCCAGCCCGGGGCGCAGTAACCCAGCACAGTGGTTAGATAGATAAAGCGGCCGCTCGACTAG
TCTGAGGTCTGATACTCACTGACGTGATACGT

>gi|4506072|ref|NM_002741.1| Homo sapiens protein kinase C-like 1 (PRKCL1),
mRNA (SEQ ID NO:30)

TGAGTAAATCGATACATACGCGCGCTCCTCTGGCCGCCCTCCCTCCGACGATCGGGGACCCTGGCG
GGCGGCAGGAGGACATGGCCAGCGACGCCGTGCAGAGTGAGCCTCGCAGCTGGTCCCTGCTAGAGCAGCT
GGGCTGGCCGGGCGAGACCTGGCGGCCCGGGGTACAGCAGCAGCTGGAGCTGGAGCGGGAGCGGCTG
CGGCGGGAAATCCGAAGGAGCTGAAGCTGAAGGAGGTGCTGAGAACCTGCGGCGGGCCACCACTGACC

TGGGCCCGCAGCCTGGGCCCGCTAGAGCTGCTGCTGCGGGGCTCCTCGCGCCGCTCGACCTGCTGCACCA
GCAGCTGCAGGAGCTGCACGCCCACGTGGTGTCTCCCGACCCGGCGGCCACCCACGATGGCCCCCAGTCC
CCTGGTGGGGTGGCCCCACCTGCTCGGCCACCAACCTGAGCCGCGTGGCGGGCCTGGAGAAGCAGTTGG
CCATTGAGCTGAAGGTGAAGCAGGGGGCGGAGAACATGATCCAGACCTACAGCAATGGCAGCACCAAGGA
CCGGAAGCTGCTGCTGACAGCCCAGCAGATGTTGCAGGACAGTAAGACCAAGATTGACATCATCCGCATG
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CTGACCTGGGGGCTGTGGAGCTGCGCATCGAAGAGCTGCGGCACCACTTCCGAGTGGAGCACGCGGTGGC
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ACAGGGACCTGGAGGTACGAGTGGTGGGTGTCAGAGACCTCCCAGAGACCATCCCGTGAACCTACCC
CCTCAATGGGGGACCTGGGACCCAGACAGCCGCCCCCTTTCCTGAGCCGCCCAGCCCGGGGCTTTA
CAGCCGAAGCGGAAGCCTCAGTGGCCGGAGCAGCCTCAAAGCAGAAGCCGAGAACACCAAGTGAAGTCAGC
ACTGTGCTTAAGCTGGATAACACAGTGGTGGGGCAGACGTCTTGAAGCCATGTGGCCCCAATGCCTGGG
ACCAGAGCTTCACTCTGGAGCTGGAAGGGCAGGGAACTGGAGTTGGCTGTGTTCTGGCGGGACACGCG
GGGCTGTGTGCCCTCAAATTCCTGAAGTTGGAGGATTTCTTGACAATGAGAGGCATGAGGTGCAGCTG
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TCCCCATTTCCAGGGGATGATGAGGAGGAGTCTTCGACAGCATCGTCAACGACGAGGTTGCTACCCCC
GCTTCTGTGCGCCGAAGCCATCGGCATCATGAGAAGGCTGCTTCGGAGGAACCCAGAGCGGAGGCTGGG
ATCTAGCGAGAGATGCGAAGATGTGAAGAAACAGCCCTTCTTCAGGACTCTGGGCTGGGAAGCCCTG
TTGGCCCGGCGCTGCCACCGCCCTTTGTGCCCCAGCTGTCCGGCCGACCGACGTCAGCAACTTCGACG
AGGAGTTCACCGGGGAGGCCCCACACTGAGCCCGCCCCGCGACGCGCGGCCCTCACAGCCGCGGAGCA
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CTGCCCCGAGAGCTCTTAGTTTTTAAAAAGGCCTTTGGGATTTGCCGAAAAAAAAAAAAA

>gi|4506073|ref|NP_002732.1| protein kinase C-like 1; serine-threonine kinase
N [Homo sapiens] (SEQ ID NO:31)

MASDAVQSEPRSWSLLEQLGLAGADLAAPGVQQQLELERERLRREIRKELKLKEGAENLRRATTDLGRSL
GPVELLLRGSSRRLLDLHQQLQELHAHVLPDPAATHDGPQSPGAGGPTCSATNLSRVAGLEKQLAIELK
VKQGAENMIQTYNSGSKDRKLLTAQQMLQDSKTKIDIIRMQLRRALQADQLENQAAPDDTQGSDDLGA
VELRIEELRHHRFEHAVAEGAKNVLRLLSAAKAPDRKAVSEAQEKLTESNQKLGLLREALERRLGELPA
DHPKGRLLREELAAASSAAFSTRLAGPFPATHYSTLCKPAPLTGTLEVRVVGCRDLPETIPWNPTPSMGG
PGTPDSRPFLSRPARGLYSRGSLSGRSSLKAEANTSEVSTVLKLDNTVVGQTSWKPCGPNWDQSFT
LELERARELELAVFWRDQRLCALFKLEDFLDNERHEVQLDMEPQGCLVAEVTFRNPVIERIPRLRRQ
KKIFSKQQGKAFQARQMNIDVATWVRLRLRIPNATGTGTFSPGASPGSEARTTGDISVEKLNLTGDS
SSPQKSSRDPPSSPSSLPISPIQESTAPELPSETQETPGPALCSPLRKSPLTLEDFKFLAVLGRGHFGKVL
LSEFRPSGELFAIKALKKGDIVARDEVESLMCEKRILAAVTSAGHPFLVNLFGCFQTPHEVCFVMEYSAG

GDLMLHIHSDVFSEPRAlFYsACVVLGLQFLHEHKIVYRDLKLDNLLDTEGYVKIADFLCKEGMGYGD
RTSTFCGTPEFLAPEVLTDTSYTRAVDWWGLGVLLYEMLVGESPFPGDDEEEVFDSIVNDEVRYPRFLSA
EAIGIMRLLRRNPERRLGSSERDAEDVKKQPFRTLGWEALLARRLPPPFVPTLSGRTDVSNFDEEFTG
EAPTLSPPRDARPLTAAEQAAFLDFDFVAGGC

Zip kinase

GH1-68-PCR-G3F1 (SEQ ID NO:32)

GCTGGGTTTCATTTTCGAGTATTCGCGGGCCTGCTCTCAGCTAGGTTTAGCCCGTTTCGTGACCCTCCACGTGCACTCG
TGGTCACTGTGGCACCGTGAGGGTTGGGACCCACCGAGGCGCAAGGCGGCCGAATGCGCCTGTTAGCCCGGAGAGG
TTTGGCGGTAGTTGCCGGACATTCGGCGGGGTGCTGCCTGTTGCTGCCATTATGCCCAGGAGGAGGTTCGTGGGACGG
GGAGGTGGGATGGACGGCGGACAGGCAGTCCCCACGCTGCTTGGTGGCGCCGGCTTGGTGGGGTCTTCCACTGTGT
GCCCTTCTCGCCGAGGGCGGTCCCCCGCGTGTGGGGTGCCCTGCTGCGGACTCCTCCGCACGCGAGAAACCAGCAC
AGTGGTTAGAGTAGATAAAGCGGGCGAGTCGACTAGATCTGAGGTCTGATACTCACTGACTGTTTCGTAA

>gi|4557510|ref|NM_001348.1| Homo sapiens death-associated protein kinase 3
(DAPK3), mRNA (SEQ ID NO:33)

GTTGCCATTAGGGGACTCCTGAGGTCCTATCTCCAGGCTGCGGTGACTGCACTTTCCCTGGAGTGGAAGC
TGCTGGAAGGCGGACCGGCCGCCATGTCCACGTTTCAGGCAGGAGGACGTGGAGGACCATTATGAGATGGG
GGAGGAGCTGGGCAGCGGCCAGTTTGCATCGTGCAGGAGTGCAGGAGGAGGACGAGGAGGAGGAGATCGAGC
GCAGCCAAGTTCATCAAGAAGCGCCGCTGTATCCAGCGCGGTGGGGTGAGCCGGGAGGAGATCGAGC
GGGAGGTGAACATCCTGCGGGAGATCCGGCACCCCAACATCATCACCTGCACGACATCTTCGAGAACA
GACGGACGTGGTCTCATCTGGAGCTGGTCTCTGGCGGGGAGCTCTTTGACTTCTGGCGGAGAAAGAG
TCGCTGACGGAGGACGAGGCCACCCAGTTCTCAAGCAGATCCTGGACGGCGTTCACTACCTGCACTCTA
AGCGCATCGCACACTTTGACCTGAAGCCGGAACATCATGCTGCTGGACAAGAAGCTGCCCAACCCACG
AATCAAGCTCATCGACTTCGGCATCGCGCACAAGATCGAGGCGGGGAACGAGTTCAAGAACATCTTCGGC
ACCCCGGAGTTTGTGGCCCCAGAGATTGTGAATATGAGCCGCTGGGCCTGGAGGCGGACATGTGGAGCA
TCGGTGTATCACCTATATCCTCCTGAGCGGTGCATCCCCGTTTCTGGGCGAGACCAAGCAGGAGACGCT
CACCAACATCTCAGCCGTGAATACGACTTCGACGAGGAGTACTTCAGCAACACCAGCGAGCTGGCCAAG
GACTTCATTTCGCCGGCTGCTCGTCAAAGATCCCAAGCGGAGAATGACCATGCCCAGAGCCTGGAACATT
CCTGGATTAAAGCGATCCGGCGGCGGAACGTGCGTGGTGAGGACAGCGGCCGCAAGCCGAGCGGCGGCG
CCTGAAGACCACGCGTCTGAAGGAGTACACCATCAAGTCGCACTCCAGCTTGGCGCCCAACAACAGCTAC
GCCGACTTCGAGCGCTTCTCCAAGGTGCTGGAGGAGGCGGCGGCCGAGGAGGCGCTGCGCGAGCTGC
AGCGCAGCGCGGCGCTCTGCCACGAGGACGTGGAGGCGCTGGCCGCCATCTACGAGGAGAAGGAGGCGCTG
GTACCGGAGGAGAGCGACAGCCTGGGCCAGGACCTGCGGAGGCTACGGCAGGAGCTGCTCAAGACCGAG
GCGCTCAAGCGGCAGGCGCAGGAGGAGGCCAAGGGCGCGCTGCTGGGGACCAGCGGCCTCAAGCGCCGCT
TCAGCCGCTGGAGAACCCTACGAGGCGCTGGCCAAGCAAGTAGCCTCCGAGATGCGCTTCGTGCAGGA
CCTCGTGCGCGCCCTGGAGCAGGAGAAGCTGCAGGGCGTGAGTGCGGGCTGCGCTAGGCGCAGTGGGGT
GGGCCAGGCCCCAGGACAGCCGAGCTCGGCCTGCGGTGGGGGCGCTTCTGTGGACGCTGCGCCTCCCA
TCGCCCCGGGTGCTGTCTTGGCCAGCGCCACCAGGCTGGAGGCGGAGTGGGAGGAGCTGGAGCCAGGCC
CGTAAGTTCGACGCGAGGGGTGGGTGTGGGACGGGGCTGCTTCTTACACAGCCTCTACGCTGGCCTTCA
CCTTACCCCTGCATCGTTCGGTGACCTGGGACCCTCCAGGCAGCGTGGCCTGTGGCACCGTGAGGGTTG
GGACCCACCGAGGCGCAGAGGCGGCCGAATGCAGCCCTGGTTTCAGGCCCCGAGGAGGGTTTGGCGGTAG
TTGCACGGACAATTTCGGCGGGGTGCTGCCTGTTGCTGCCATTAGCCAGGAGGAGGTTCGTGGGACGGGGA
GGGTGGGATGGACGGCGGACAGGCAGTCCCCACGCTGCTGGGTGGCGCCGGGCTTGGTGGGGTCTTCCAC
TGTGTGCCCTTCTCGCCGAGGCGGTCCCCCGGTGTGGGGTGCCCTGCTGCGGACTCCTCCGCGAGCCC
CATCGTCGCGCCTGTGGACGCTTAGGCAAGAGCGGCCCTCTGCAGCCAAGAGAAATAAAATACTGGCTTC
CAGAT

>gi|4557511|ref|NP_001339.1| death-associated protein kinase 3 [Homo sapiens]
(SEQ ID NO:34)

MSTFRQEDVEDHYEMGEELGSGQFAIVRKRQKGTGKEYAAKFIKKRRLSSSRRGVSREEIEREVNILRE

IRHPNIIITLHDI FENKTDVVLILELVSGGELFDFLAEKESL TEDEATQFLKQILDGVHYLHSKRIAHFDL
KPENIMLLDKNVPNPRIKLIDFGIAHKIEAGNEFKNIFGTPEFVAPEIVNYEPLGLEADMWSIGVITYIL
LSGASPFLETGKETLTNISAVNYDFDEEYFSNTSELAKDFIRRLLVKDPKRRMTIAQSLEHSWIKAIRR
RNVRGEDSGRKPERRRLKTTRLKEYTIKSHSSLPPNNSYADFERFSKVLEEAEEGLRELQSRRLCH
EDVEALAAIYEEKEAWYREESDSLQDLRRLRQELLKTEALKRQAQEEAKGALLGTSGLKRRFSRLNRY
EALAKQVASEMRVQDLVRALEQEKLOGVECGLR

>gi|2911155|dbj|AB007144.1| Homo sapiens mRNA for ZIP-kinase, complete cds
(SEQ ID NO:35)

GTTGCCATTAGGGGACTCCTGAGGTCTATCTCCAGGCTGCGGTGACTGCACTTTCCCTGGAGTGGAAGC
TGCTGGAAGGCGGACCGGCCGCCATGTCCACGTTTCAGGCAGGAGGACGTGGAGGACCATTATGAGATGGG
GGAGGAGCTGGGCAGCGGCCAGTTTGCGATCGTGCGGAAGTGCCGGCAGAAGGGCACGGGCAAGGAGTAC
GCAGCCAAGTTCATCAAGAAGCGCCGCTGTATCCAGCCGGCGTGGGGTGAGCCGGGAGGAGATCGAGC
GGGAGGTGAACATCCTGCGGGAGATCCGGCACCCCAACATCATCACCTGCACGACATCTTCGAGAACA
GACGGACGTGGTCTCATCTGGAGCTGGTCTCTGGCGGGGAGCTCTTTGACTTCCTGGCGGAGAAAGAG
TCGCTGACGGAGGACGAGGCCACCCAGTTCTCAAGCAGATCCTGGACGGCGTTCCTACCTGCACTCTA
AGCGCATCGCACACTTTGACCTGAAGCCGGAACATCATGCTGCTGGACAAGAAGCTGCCCAACCCACG
AATCAAGCTCATCGACTTCGGCATCGCGCACAAAGATCGAGGCGGGGAACGAGTTCAAGAACATCTTCGGC
ACCCCGGAGTTTGTGGCCCCAGAGATTGTGAACATGAGCCGCTGGGCCTGGAGGCGGACATGTGGAGCA
TCGGTGTCATCACCTATATCCTCCTGAGCGGTGCATCCCCGTTCTGGGCGAGACCAAGCAGGAGACGCT
CACCAACATCTCAGCCGTGAACCTACGACTTCGACGAGGAGTACTTCAGCAACACCAGCGAGCTGGCCAAG
GACTTCATTTCGCCGGCTGCTCGTCAAAGATCCCAAGCGGAGAATGACCATTGCCAGAGCCTGGAACATT
CCTGGATTAAAGGCGATCCGGCGGCGGAACGTGCGTGGTGAGGACAGCGGCCGCAAGCCGAGCGGCGGCG
CCTGAAGACCACGCGTCTGAAGGAGTACACCATCAAGTCGCACTCCAGCTTGCCGCCCAACAACAGCTAC
GCCGACTTCGAGCGCTTCTCCAAGGTGCTGGAGGAGGCGGCGGCCGAGGAGGGCCTGCGCGAGCTGC
AGCGCAGCCGGCGGCTCTGCCACGAGGACGTGGAGGCGCTGGCCGCCATCTACGAGGAGAAGGAGGCCTG
GTACCGCGAGGAGAGCGACAGCCTGGGCCAGGACCTGCGGAGGCTACGGCAGGAGCTGCTCAAGACCGAG
GCGCTCAAGCGGCAGGCGCAGGAGGAGGCCAAGGGCGCGCTGCTGGGGACCAGCGGCCTCAAGCGCCGCT
TCAGCCGCCTGGAGAACCCTACGAGGCGCTGGCCAAGCAAGTAGCCTCCGAGATGCGCTTCGTGCAGGA
CCTCGTGCGCGCCCTGGAGCAGGAGAAGCTGCAGGGCGTGGAGTGCGGGCTGCGCTAGGCGCAGTGGGGT
GGGCCAGGCCCCAGGACAGCCGGAGCTCGGCCTGCGGTGGGGGCGCTTCTGTGGACGCTGCGCCTCCCA
TCGCCCGGGTGCCGTGCTTGTGCCAGCGCCACCAGGCTGGAGGCGGAGTGGGAGGAGCTGGAGCCAGGCC
CGTAAGTTCGAGGAGGAGGGTGGGTGTGGGACGGGGCTGCTTCTCTACACAGCCTCTACGCTGGCCTTCA
CCTTACCCCTGCATCGTGGTGACCTGGGACCTCCAGGACGCTGGCCTGTGGCACCCTGAGGGTTG
GGACCCACCGGACGAGGCGGCCGAATGCAGCCCTGGTTTCAGGCCGAGGAGGGTTTGGGGTTAG
TTGCACGGACAATTCGGCGGGGTGCTGCCTGTTGCTGCCATTAGCCAGGAGGAGGTCGTGGGACGGGGA
GGGTGGGATGGACGGCGGACAGGCAGTCCCCACGCTGCTGGGTGGCGCCGGGCTTGGTGGGGTCTTCCAC
TGTGTGCCCTTCTCGCCGAGGCGGTCCCCCGGTGTGGGGTGCCCTGCTGCGGACTCCTCCGCGAGCCC
CATCGTCGCGCCTGTGGACGCCTAGGCAAGAGCGGCCCTCTGCAGCCAAGAGAAATAAAATACTGGCTTC
CAGAT

>gi|2911156|dbj|BAA24955.1| ZIP-kinase [Homo sapiens] (SEQ ID NO:36)
MSTFRQEDVEDHYEMGEELGSGQFAIVRKCRQKGTGKEYAAKFIKKRRLSSSRRGVSREEIEREVNIRE
IRHPNIIITLHDI FENKTDVVLILELVSGGELFDFLAEKESL TEDEATQFLKQILDGVHYLHSKRIAHFDL
KPENIMLLDKNVPNPRIKLIDFGIAHKIEAGNEFKNIFGTPEFVAPEIVNYEPLGLEADMWSIGVITYIL
LSGASPFLETGKETLTNISAVNYDFDEEYFSNTSELAKDFIRRLLVKDPKRRMTIAQSLEHSWIKAIRR
RNVRGEDSGRKPERRRLKTTRLKEYTIKSHSSLPPNNSYADFERFSKVLEEAEEGLRELQSRRLCH
EDVEALAAIYEEKEAWYREESDSLQDLRRLRQELLKTEALKRQAQEEAKGALLGTSGLKRRFSRLNRY
EALAKQVASEMRVQDLVRALEQEKLOGVECGLR

>gi|5162883|dbj|AB022341.1| Homo sapiens mRNA for ZIP kinase, complete cds
(SEQ ID NO:37)

GCACTTTCCCTGGAGTGGGAAGCTGCTGGAAGGCGGACCGGCCCATGTCCACGTTTCAGGCAGGAGGACG
TGGAGGACCATTATGAGATGGGGGAGGAGCTGGGCAGCGGCCAGTTTTCGATCGTGCAGGAAGTGCCGGCA
GAAGGGCACGGGCAAGGAGTACGCAGCCAAGTTCATCAAGAAGCGCCGCTGTCATCCAGCCGGCGTGGG
GTGAGCCGGGAGGAGATCGAGCGGGAGGTGAACATCCTGCGGGAGATCCGGCACCCCAACATCATCACCC
TGCACGACATCTTCGAGAACAAGACGGACGTGGTCTCATCTGGAGCTGGTCTCTGGCGGGGAGCTCTT
TGACTTCCTGGCGGAGAAGGAGTTCGTGACGGAGGACGAGGCCACCCAGTTCTCAAGCAGATCCTGGAC
GGCGTTCACTACCTGCACTCTAAGCGCATCGCACACTTTGACCTGAAGCCGGAACATCATGCTGCTGG
ACAAGAAGCTGCCCAACCCACGAATCAAGCTCATCGACTTCGGCATCGCGACAAGATCGAGGCGGGGAA
CGAGTTCAAGAACATCTTCGGCACCCCGGAGTTTGTGGCCCCAGAGATTGTGAACATGAGCCGCTGGGC
CTGGAGGCGGACATGTGGAGCATCGGTGTCATCACCTATATCCTCCTGAGCGGTGCATCCCCGTTCTTGG
GCGAGACCAAGCAGGAGACGCTCACCAACATCTCAGCCGTGAACCTACGACTTCGACGAGGAGTACTTCAG
CAACACCAGCGAGCTGGCCAAGGACTTCATTGCGCGGTGCTCGTCAAAGATCCCAAGCGGAGAATGACC
ATTGCCCAGAGCCTGGAACATTCTGGATTAAAGGCGATCCGGCGGCGGAACGTGCGTGGTGGAGACAGCG
GCCGCAAGCCCGAGCGGCGGCGCCTGAAGACCACGCGTCTGAAGGAGTACACCATCAAGTCGCACTCCAG
CTTGCCGCCCAACAACAGCTACGCCGACTTCGAGCGCTTCTCCAAGGTGCTGGAGGAGGCGGCGGCCGCC
GAGGAGGCGCTGCGCGAGCTGCAGCGCAGCGCGGCTGTCACGAGGACGTGGAGGCGCTGGCCGCCA
TCTACGAGGAGAAGGAGGCGCTGGTACCGCGAGGAGAGCGACAGCCTGGGCCAGGACCTGCGGAGGCTACG
GCAGGAGCTGCTCAAGACCGAGGCGCTCAAGCGGCGAGGCGCAGGAGGAGGCCAAGGGCGCGCTGCTGGGG
ACCAGCGGCGCTCAAGCGCGCTTCAGCCGCTGGAGAACCCTACGAGGCGCTGGCCAAGCAAGTAGCCT
CCGAGATGCGCTTCGTGCAGGACCTCGTGCAGCGCCTGGAGCAGGAGAAGCTGCAGGGCGTGGAGTGGCG
GCTGCGCTAGGCGCAGTGGGGTGGGCCAGGCCCCAGGACAGCCGAGCTCGGCCTGCGGTGGGGGCGCTT
CCTGTGGACGCTGCGCCTCCCATCGCCCGGGTGCCTGTCTTGGCCAGCGCCACCAGGCTGGAGGCGGAG
TGGGAGGAGCTGGAGCCAGGCCCCGTAAGTTCGAGGCGAGGGGTGGGTGTGGGACGGGGCTGCTTCTCTAC
ACATCCTCCACGCTGGCCTTCACCTTCACCCCTGCATCGTTCGGTACCCTGGGACCCTCCAGGCAGCGTG
GCCTGTGGCACCGTGAGGGTTGGGACCCACCGAGGCGCAGAGGCGGCCCGAATGCAGCCCTGGTTTCAGGC
CCGGAGGAGGGTTTTCGGGTAGTTGCACGGACAATTCGGCGGGGTGCTGCCTGTTGCTGCCATTAGCCCA
GGAGGAGGTGCTGGGACGGGGAGGGTGGGATGGACGGCGGACAGGCAGTCCCCACGCTGCTGGGTGGCGC
CGGGCTTGGTGGGGTCTTCCACTGTGTGCCCTTCTCGCCGAGGCGGGTCCCCCGGGTGTGGGGTGGCCCTG
CTGCGGACTCCTCCGCGAGCCCATCGTTCGCGCCTGTGGACGCTAGGCAAGAGCGGCCCTCTGCAGCCA
AGAGAAATAAAATACTGGCTTCCAG

>gi|5162884|dbj|BAA81746.1| ZIP kinase [Homo sapiens] (SEQ ID NO:38)
MSTFRQEDVEDHYEMGEELGSGQFAIVRKRQKGTGKEYAAKFIIKRRLLSSRRGVSRREEIEREVNILE
IRHPNIIITLHDI FENKTDVVLILELVSGGELFDFLAEKESLDEATQFLKQILDGVHYLHASKRIAHFDL
KPENIMLLDKNVPNPRIKLIDFGIAHKIEAGNEFKNIFGTPEFVAPEIVNYEPLGLEADMWSIGVITYIL
LSGASPFLETGKETLTNISAVNYDFDEEYFSNTSELAKDFIRLLLVKDPKRRMTIAQSLEHSWIKAIRR
RNVRGEDSGRKPERRRLKTRLKEYTIKSHSLPPNNSYADFERFSKVLEEAEEGLRELQRSRLCH
EDVEALAAIYEEKEAWYREESDSLQDLRRLRQELLKTEALKRQAQEEAKGALLGTSGLKRRFSRLNRY
EALAKQVASEMRFVQDLVRALEQEKLGVECLR

Gas6

GH1-50-PCR-G3F1 (SEQ ID NO:39)
GCGCAGGAATCTGGTTCATCAAGGTCAACAGGGATGCTGTTCATGAAAATCGCGGTGGCCGGGGACTTGTTCCAACCGG
AGCGAGGACTGTATCATCTGAACCTTACCGTGGGAGGTATTCCCTTCCATGAGAAGGACTACGTGCAGCTATAAAAC
CTCGTCTGGATGCTGCACTGAAGAGCGCGCAGAAACCAACAC

>gi|4557616|ref|NM_000820.1| Homo sapiens growth arrest-specific 6 (GAS6),
mRNA (SEQ ID NO:40)
CCGACGCGCGCGCGCGCGCGCGCGCGATGTGACCTTCAGGGCCGCCAGGACGGGATGACCGGAGCCT
CCGCCCCGCGCGCGCGCGCTCGCCTCGGCCTCCCGGGCGCTCTGACCGCGCGTCCCCGGCCCGCCATGGCC
CCTTCGCTCTCGCCCGGGCCCGCGCCCTGCGCCGCGCGCGCAGCTGCTGCTGCTGCTGCTGGCCGCGG

AGTGCGCGCTTGCCGCGCTGTTGCCGGCGCGCGAGGCCACGCAGTTCCTGCGGCCAGGCAGCGCCGCGC
CTTTTCAGGTCTTCGAGGAGGCCAAGCAGGGCCACCTGGAGAGGGAGTGCGTGAGGAGCTGTGCAGCCGC
GAGGAGGCGCGGGAGGTGTTGAGAACGACCCCGAGACGGATTATTTTTACCCAAGATACTTAGACTGCA
TCAACAAGTATGGGTCTCCGTACACCAAAAACTCAGGCTTCGCCACCTGCGTGCAAAACCTGCCTGACCA
GTGCACGCCCCAACCCCTGCGATAGGAAGGGGACCCAAGCCTGCCAGGACCTCATGGGCAACTTCTTCTGC
CTGTGTAAAGCTGGCTGGGGGGGCGGCTCTGCGACAAAGATGTCAACGAATGCAGCCAGGAGAACGGGG
GCTGCCTCCAGATCTGCCACAACAAGCCGGGTAGCTTCCACTGTTTCTGCCACAGCGGCTTCGAGCTCTC
CTCTGATGGCAGGACCTGCCAAGACATAGACGAGTGCGCAGACTCGGAGGCCTGCGGGGAGGCGCGCTGC
AAGAACCTGCCCCGCTCCTACTCCTGCCTCTGTGACGAGGGCTTTGCGTACAGCTCCCAGGAGAAGGCTT
GCCGAGATGTGGACGAGTGTCTGCAGGGCCGCTGTGAGCAGGTCTGCGTGAACCTCCCCAGGGAGCTACAC
CTGCCACTGTGACGGGCGTGGGGGCTCAAGCTGTCCCAGGACATGGACACCTGTGAGGACATCTTGCCG
TGCGTGCCCTTCAGCGTGCCCAAGAGTGTGAAGTCCTTGTACCTGGGCGGATGTTCAAGTGGGACCCCCG
TGATCCGACTGCGCTTCAAGAGGCTGCAGCCCACAGGCTGGTAGCTGAGTTTGAAGTTCGGACCTTTGA
CCCCGAGGGCATCTCCTCTTTGCCGGAGGCCACAGGACAGCACCTGGATCGTGCTGGCCCTGAGAGCC
GGCCGGCTGGAGCTGCAGCTGCGCTACAACGGTGTGCGCCGTGTCAACAGCAGCGGCCCCGGTCATCAACC
ATGGCATGTGGCAGACAATCTCTGTTGAGGAGCTGGCGCGGAATCTGGTCATCAAGGTCAACAGGGATGC
TGTCATGAAAATCGCGGTGGCCGGGGACTTGTCCAACCGGAGCGAGGACTGTATCATCTGAACCTGACC
GTGGGAGGTATTCCCTTCCATGAGAAGGACCTCGTGACGCTATAAACCTCGTCTGGATGGCTGCATGA
GGAGCTGGAACCTGGCTGAACGGAGAAGACACCACCATCCAGGAAACGGTGAAAGTGAACACGAGGATGCA
GTGCTTCTCGGTGACGGAGAGAGGCTCTTTCTACCCCGGGAGCGGCTTCGCTTCTACAGCCTGGACTAC
ATGCGGACCCCTCTGGACGTGCGGACTGAATCAACCTGGGAAGTAGAAGTCTGGCTCACATCCGCCCAG
CCGCAGACACAGGCGTGCTGTTTTCGCTCTGGGCCCCGACCTCCGTGCCGTGCCTCTCTGTGGCACT
GGTAGACTATCACTCCACGAAGAACTCAAGAAGCAGCTGGTGGTCTGGCGTGAGCATAACGGCCTTG
GCCCTAATGGAGATCAAGGTCTGCGACGGCCAAGAGCACGTGGTCACCGTCTCGCTGAGGGACGGTGAGG
CCACCCTGGAGGTGGACGGCACAGGGGCCAGAGCGAGGTGAGCGCCGCGCAGCTGCAGGAGAGGCTGGC
CGTGCTCGAGAGGCACCTGCGGAGCCCCGTGCTCACCTTTGCTGGCGGCTGCCAGATGTGCCGGTGACT
TCAGCGCCAGTCACCGCGTTCTACCGCGGCTGCATGACACTGGAGGTCAACCGGAGGCTGCTGGACCTGG
ACGAGGCGGCGTACAAGCACAGCGACATCACGGCCCCACTCCTGCCCCCGTGGAGCCCGCCGAGCCTA
GGCCCCACGGGACGCGGCAGGCTTCTCAGTCTCTGTCCGAGACAGCCGGGAGGAGCCTGGGGGCTCCTC
ACCACGTGGGGCCATGCTGAGAGCTGGGCTTTCCTCTGTGACCATCCCGGCTGTAAATATCTGTAAAT
AGTGAGATGGACTTGGGGCTCTGACGCCGCGCACTCAGCCGTGGGCCCCGGGCGGGGAGGCCGGCGCA
GCGCAGAGCGGCTCGAAGAAAATAATTCTCTATTATTTTATTACCAAGCGCTTCTTTCTGACTCTAAA
ATATGGAAAAT

>gi|4557617|ref|NP_000811.1| growth arrest-specific 6; AXL stimulatory factor
[Homo sapiens] (SEQ ID NO:41)

MAPSLSPGPAALRRAPQLLLLLLAAECALALLPAREATQFLRPRQRRAFQVFEEAKQGHLEECVEELC
SREEAREVFENDPETDYFYPRYLDCKINKYGSPTKNSGFATCVQNLDPDQCTPNPCDRKGTQACQDLGNF
FCLCKAGWGGRLCDKDVNECSQENGGCLQICHNKPFSFHCSCHSFELSSDGRTCDIDECADSEACGEA
RCKNLPGSYSLCDEGFAYSSQEKACRDVDECLQRCEQVCVNSPGSYTCHCDGRGGLKLSQDMDTCEDI
LPCVPFSAKSVKSLYLGRMFSGTPVIRLRFKRLQPTLVAEFDFTFDPEGILLFAGGHQDSTWIVLAL
RAGRLEQLRYNGVGRVTSSGPVINHGMWQTISVEELARNLVIKVNRAVMKIAVAGDLFQPERGLYHLN
LTVGGIPFHEKDLVQPINPRLDGCMRSWNWLNGETTIIQETVKVNTRMQCFSVTERGSFYPGSGFAYSL
DYMRTPLDVGTSTWEVEVVAHIRPAADTGVLFWALWAPDLRAVPLSVALVDYHSTKKLKKQLVVLAVEHT
ALALMEIKVCDGQEHVVTVSLRDGEATLEVDGTRGQSEVSAAQLQERLAVLERHLRSPVLTFAAGGLPDVP
VTSAPVTAIFYRGCMTELVNRLLDLDEAAYKHSIDITAHSCPPVEPAAA

SRm160

GH1-67-PCR-G3F1 (SEQ ID NO:42)

GGTTCTCTCCTCGTCGTCTTCTCCCTTCCCTTCTAAGCCTGGCCCTCAGGCCTTGCCCAAACCTGCAAGCCCCA
AGAAGCCACCCCTTGCGAGCGGAGGTCCGCAGCCCCGAAGCCAATAACTCCCTCAGGGGACTCTCGGTCCCTCAG

CTACTCGCCTGTGGAGCGTCGCCGTCCCTCGCCCCAGCCCTCACCACGGGACCAGCAGAGCAGCAGCAGTGAAGCGGG
GTTCCCGGAGAGGCCAGCGTGGGGACAGCCGCTCCCCAGCCACAAGCGCAGAGGAGACACCTAGCCCTCGGCCATG
AGACACCGCTCCTCCAGGTCTCCATAAATTGTCTTTGGGGGATTNCACCACACCCATGCTCTTGAGCCACAAGGAGT
GTTCTTTCTTCCCCAGCAGAACCGTGGAAGGTCTTGTCTGCGTCTCCTTTTAACCTTNGCAGCCTTTGATTGGAG
GGGCGTCCCTTTTTCCCTCCCCCTTTTTTAG

>gi|19923465|ref|NM_016333.2| Homo sapiens serine/arginine repetitive matrix
2 (SRRM2), mRNA (SEQ ID NO:43)

GCGGCCCAGGCGGGGTGCGAGTGGCGCAGTCGGAGCCCCTTGCGGCCCTGAGGAAGCGAGGAGGCGTTCG
GCGTCGGCTGAGGCGGGCGGACCGGCGAGGCGAGGCGGGCGGCCCCAGGCCCAGGGACTCGGGAGCTCGA
GCAGCGGCGGGCGGAAGACCTCTCCCCCTCGGAGGCGGGCGGGCGGAGGCGGGGAGCGGTGGTGGCCCC
CCCGGGCACGGGGCCATGTACAACGGGATCGGGCTGCCGACGCCCCGGGGCAGCGGCACCAACGGCTACG
TCCAGCGCAACCTGTCCCTGGTGGCGGGGCGCGGGGTGAGCGGCCTGACTACAAGGGAGAGGAGGA
GCGGCGCCTGGAGGCTGCCCTGGTGAAGCGGCCTAATCCTGACATCCTGGACCACGAGCGCAAGCGGCGC
GTCGAGCTGCGATGCCTCGAGCTGGAGGAGATGATGGAAGAGCAGGGGTACGAGGAACAGCAAATTCAGG
AAAAAGTGGCGACCTTTTCGACTCATGTTGCTGGAGAAGGATGTGAACCTTGGGGGCAAGGAGGAGACCCC
AGGGCAGAGGCGAGCGGTACGGGAGACTCACCAGTTGGCAGAATTAATGAGAAGAAGATGAAAGACTC
CGTGCTGCCTTTGGCATCAGTGATTCTTACGTAGATGGCAGCTCTTTTGATCCTCAGCGTCGTGCCCGAG
AAGCTAAACAACAGCTCCTGAGCCTCCCAAACCTTACAGCCTTGTTCGGGAGTCTAGCAGTTCTCGCTC
ACCAACCCCAAAGCAGAAGAAGAAGAAAAAGAAAGATAGAGGACGAGGTGAGAGAGCAGCTCTCCT
CGACGGGAGAGAAAGAAAGCTCAAAGAAGAAGAAGCACAGGTGAGAATCTGAGTCCAAGAAACGTAAGC
ATAGGTCTCCCACTCAAAGAGCAAACGTAAATCTAAGGACAAAAAGCGAAAGCGGTCTCGAAGTACAAC
ACCAGCCCCCAAGAGCCGCGGGGCCACCGTTCAACTTCTGCTGACTCTGCTTCTCCTCCGATACTTCC
CGCAGTCGGTCTCGAAGTGCTGCAGCTAAACTCATACAACCTGCCTTGGCTGGGCGAAGTCTTCCCCTG
CTTCAGGGCGACGCGGGGAGGAGATGCGCCTTTTCAGTGAACAGGTACTACCAGCACACAACGGCCTAG
TAGCCCGGAGACTGCTACGAAACAGCCTAGCAGCCCTTATGAAGACAAAGATAAAGACAAGAAGGAGAAA
TCTGCAACTCGACCTAGCCCCCTCTCCGGAAGGAGCAGCACAGGCCCAGAACCACCTGCTCCCACTCCGC
TCCTTGCTGAGCGACATGGCGGCTCCCCACAACCCCTTGCAACCACCCCTTAAGCCAGGAGCCAGTGAA
CCCCCATCTGAGGCCTCTCCAACCTCGGGACCGTTTACCACCTAAGTCTCCCGAGAACTTCCCCAGTCT
TCTTCTCAGAGAGCAGCCCACCATCCCCTCAACCTACCAAAGTTTCTCGGCATGCCAGCTCTTCCCCAG
AAAGTCCTAAACCTGCTCCAGCTCCAGGGTCCCACCGAGAGATTTCTTCTTCTCCACATCTAAGAATCG
CTCACATGGCCGAGCAAAACGGGATAAATCACATTCTCATACCCCTCCCGTAGGATGGGGAGGTCCCGT
AGCCCTGCCACCGCTAAGAGAGGGCGATCTCGGTCTCGAACCCCTACCAAGAGAGGTCATTCTCGATCCC
GATCTCCCCAGTGGCGTAGGTCTGACAGAGTGGGGAAGATCTAGAAGCCCCCAGCGACGTGG
CCGCTCTAGGTCTCCTCAGCGACCAGGCTGGTCTAGGAGCAGAAATACCCAGAGAAGAGGCGAGGTCTAGG
TCAGCAAGGCGAGGGAGGTCCCACTCTAGATCCCCAGCCACTAGGGGTAGATCTCGTTCTAGAACACCAG
CCCGCCGGGGCAGGTCCCGCTCTAGAACACCTGCCAGGCGGAGATCACGATCCAGAACTCCCACCAGGCG
TAGGTCTCGGTCTAGAACACCAGCCCGGAGGGGCGAGGTCTCGGTCTAGAACACCTGCTAGGCGCAGATCT
AGGACCCGATCACAGTACGACGAGGTCTCGTAGTAGATCACAGCCAGGAGAAGTGGCAGGTACGCT
CTAGAACCCCACTAGACGTGGCCGCTCACGCTCCAGAACCCAGCCAGACGTGGCCGCTCACGCTCTAG
AACCCCACTAGACGCACTGGTCTGCTCACGCTCCAGAACACCAGCCAGGAGAGGGAGGTCTCGGTCTAGG
ACACCAAGACGAGGAAGATCCCGCAGTAGAAGCTTAGTTAGACGTGGAAGATCTCACTCTAGAACACCTC
AAAGAAGAGGCAGATCTGGCTCATCTTCAGAGCGGAAAAACAAATCCAGAACATCTCAAAGAAGAAGCAG
GTCCAATTCAAGCCCAGAAATGAAGAAATCTCGCATTTCTTCAAGGCGGAGCAGGTCTCTCTCTTACCA
CGGTCCAAAGCAAATCTCGCTTGTCTTTGAGGCGCAGCCTTTCAGGGTCTTCCCCATGCCCTAAGCAAA
AGTCACAGACACCACCCAGGCGAGTCGCTCTGGATCCTCCCAACCTAAAGCTAAATCTAGAAGCCACC
CAGACGCACTCGCTCCAGTTCTTCTCCGCCACCTAAACAGAAATCTAAGACACCATCAAGACAAAGTCAT
TCCAGTTCATCTCCTCATCTAAAGTGAAATCTGGAACACCACCGAGGCAAGGGTCCATAACAAGTCCCC
AGGCCAATGAGCAATCTGTAACGCCACAGAGACGGAGCTGTTTTGAATCATCACCTGACCCTGAGTTGAA
ATCTAGGACCCCTTCTAGACATAGCTGCTCAGGGTCTCTCTCTCTAGAGTGAATCTAGCACACCTCCC
AGACAGAGCCCATCTAGGTATCATCTCCACAACCCAAAGTGAAGGCAATAATATACCAAGACAAAGAA
GCCATTCTGGCTCCTCTTCTCAAGTCCTAGTAGGGTGACGTCGAGAACAACCTCCACGGCGAAGCAGATC

AGTATCTCCCTGCTCCAATGTGGAATCCAGATTGTTGCCAAGATACAGTCATTCTGGGTCTCCTCACCA
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[illegible]

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Non-muscle myosin heavy chain

GH1-90-PCR-G3F1 (SEQ ID NO:47)

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>gi|22507396|ref|NM_002473.2| Homo sapiens myosin, heavy polypeptide 9, non-  
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TGTC CATCTCTTGGGTATCAATGTGACCGATTTACCAGAGGAATCCTCACCCCGCGCATCAAGGTGGG
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GGCTGATGAAGAACATGGATCCCCTGAATGACAACATCGCCACACTGCTCCACCAGTCCCTCGACAAGTT
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>gi|12667788|ref|NP_002464.1| myosin, heavy polypeptide 9, non-muscle [Homo sapiens] (SEQ ID NO:49)

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KKRHEMPPHIYAITDTAYRSMQDREDQSILCTGESGAGKTENTKKVIQYLAYVASSHKSKKDQGELERQ
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Calmodulin 2

GH1-84-PCR-G3F1 (SEQ ID NO:50)

GCTGTCTGTAAATACCTGGTGC TAACATCCCATGCCGCTCCCTCCTCACGATGCACCCACCGCCCTGAGGGCCCGTC
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GACTTTCATTTTGTTCAGAACCATGCTGGGCTAGCTAAAGGGTGGGGAGAGGGAAGATGGGCCCCACCACGCTCTCA
AGAGAACGCACCTGCAATAAAACAGTCTTGTGCGCCAGCTGCCACGGGGACGGCAG

>gi|13477324|gb|BC005137.1|BC005137 Homo sapiens, calmodulin 2 (phosphorylase
kinase, delta), clone MGC:1447 IMAGE:3504793, mRNA, complete cds (SEQ ID
NO:51)

GGCAGCAGGGGCGCGGCGGAGCTGGAAC TGC TGCAGCTGCTGCCGCCGCCGAGGAACCTTGATCCCCGTG
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GAAAAAAAAAAAAAAAAAAAA

>gi|13477325|gb|AAH05137.1|AAH05137 calmodulin 2 (phosphorylase kinase, delta) [Homo sapiens] (SEQ ID NO:52)
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TMMARKMKDITDSEEEIREAFRVFDKDGNGYISAAELRHVMTNLGEKLTDEEVDEMIREADIDGDGQVNYE
EFVQMMTAK

Novel Symporter

GH1-178-PCR-G3F1 (SEQ ID NO:53)
CTGGGTTCTTGCGAGACTTGGCTGGAGATCAGCATGATGCCCTCACTGTCCTCAGTGAAACTCAAACTCCATCACA
GAGCCATCTCCAATGCTCAAGTAGCGGCCCTTCCCTGCCAGGCCCGGCCGGGCGACCCGAGTGGGCGATCGCGGAGC
AGGTCGGGGCCAGAGGCCGCCTCCCTTCCGGAGGCTCTCACCTGCCACAGCCACCGCTGCACCGCAGGAACCCAGCA
CAGTGGTTAGATTGATAAGCGGCCGCTCGACTAGTCTGAGGTCTGATACTCACTGACTGTCGTAT

Novel Semaphorin

GH1-204-PCR-G3F1 (SEQ ID NO:54)
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Novel Zn finger helicase

GH1-31-PCR-G3F1 (SEQ ID NO:55)
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ACCACCCCAAAGCCGAAAACCTTTCCGCAAAAACCCGCACAGTGGTTTGATTGATTAAAGGCGGCGCTCGACTAGTCT
GAGGTCTGATACTCACTGAC

Novel Sugar transporter

GH1-175-PCR-G3F1 (SEQ ID NO:56)
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CGGCTGGCTCAGCTGCCAGGCCAGGACGAGATGCTAAATTTGGCCTTCACTGTGGGCTCCTTTCTGCTCAGTGCCA
TCACCCTGCCCCTGGGTATCGTCATGGACAAGTATGGCCCCAGGAAGCTCAGGCTGCTGGGCAGCGCCTGCTTCGCG
GTTTCCTGCTTGCTGATTGCGT

human Plexin-A2 (SEQ ID NO:57)

gctgccggga ggagcggcat ccgcgccaga ctggagcggg agggcggcgg agggcagttg
ctgggaattt ttcagccgag agggcgagcg atccggagag agaccccgag agcttgggag
cggtagggcg tgcgagcgc gcagccagcg gagcaaacct cgaaatagat ctggaaagcc
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gcggtggtt tataaggtgg agcagctcat taatgccatg tccattgaga gctgagagga
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gctttgcatg aaaactcatt tgatgtatat tggggaaata atgagaactt tatttaattt
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aagaatgatg agcacaagta tgcaccaaac acttcgcaaa aacagaggcc agtaaaacct
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tdctttcaat ttccctaaag ttactatgag aagtggggtg aggtgggcct ctcccagacc
agacacctgg cagccctgcc tcatatcaat ccctgtcata aaccaggcac cctggggaaa
cggcctggag gtgtgtgggc caggcctcca cgaggttcca tttgaaagt gatttgagaga
cataggtgtt tgactttgga gttcactcca atcatccagt ggtccctggc aatt

human Plexin-A2 (SEQ ID NO:58)

MEQRRPWPRALEVDSRSVLLSVVWVLLAPPAAGMPQFSTFHSENRDWTFNHLTVHQGTGAVYVGAINRVYKLTGNL
TIQVAHKTPPEEDNKSCYPPLIVQPCSEVLTLTNNVNKLLIIDYSENRLACGSLYQGVCKLLRLDDLFILVEPSHK
KEHYLSSVNKTGTMGVIVRSEGEDGKLFITGAVDVGKQDYFPTLSSRKLPDPRESSAMLDYELHSDFVSSLIKIPSD
TLALVSHFDIFYIYGFGGFFVYFLTVPETPEGVAINSAGDLFYTSRIVRLCKDDPKFHSYVSLPFGCTRAGVEYR
LLQAAYLAKPGDSLAAFNITSQDDVLFALFSKGQKQYHHPDDLSALCAFPPIRAINLQIKERLQSCYQEGNLELNW
LLGKDVQCTKAPVPIDDNFCGLDINQPLGGSTPVEGLTLYTTSRDRMTSVASYVYNGYSVVFVGTKSGKLLKIRADG
PPHGGVQYEMVSVLKDGPILRDMAFSIDQRYLYMSESRQVTRVPVESCEQYTTCEGLSSGDPHCWCALHNMCSR
RDKCQQAWEPNRFAASISQCVSLAVHPSSISVSEHSRLSLVSDAPDLSAGIACAFGNLTEVEGQVSGSQVICISP
GPKDVPVPIPLDQDFGLQLRSKETGKIFVSTEFKFYNCSAHQLCLSCVNSAFRCHWCKYRNLC THDPTTCSFQEG
RINISEDQPQLVPTEEILIPVGEVKPITLKARNLPQPQSGQRGYECVLNIQGAHRVPALRFNSSSVQCNSSYQYD
GMDISNLAVDFAVVWNGNFIIDNPQDLKVHLYKCAAQRESCGLCLKADRFECGWCSGERRCTLHQHCTSPSSPWLD
WSSHNVKCSNPQITEILT VSGPPEGGRVTIHGVNLGLDFSEIAHHVQVAGVPCTPLPGEYIIAEQIVCEMHALVG
TTSGPVRLCIGECKPEFMTKSHQQYT FVNPSVLSLNPIRGPESGGTMVITIGHYLGAGSSVAVYLGNTCEFYGRSM
SEIVCVSPSSNGLGPVPVSVDRAHVDSNLQFEYIDDPVQRIEPEWSIASGHTPLTITGFNLVDVIEQPRIRVKF
NGKESVNVCKVNTTTLTCLAPSLT TDYRPLDTPVERPDEFGFVFNNVQSLLIYNDTKFIYYPNPTFELLSPTGVLD
QKPGSPIILKGKNCPPASGGAKLNYTVLIGETPCAVTVSETQLLCEPPNLTGQHKVMVHVGMVFSFGSVSVISDS
LLTLPALVIAAGGSLLLIIVIIVLIA YKRKSRENDLT LKRLQMOMDNLES RVALECKEAFELQTDINELTSDLDR
SGIPYLDYRTYAMRVLPFGIEDHPVLRLELVQNGGQHV KALKLFAQLINNKVFLLT FIRTLELQRSFSMRDRGNV
ASLIMTGLQGRLEYATDVLKQLLSDLIDKNLENKNHPKLLLRTE SVAEKMLTNWFAFLHKLKECAGEPLFMYLC
AIKQQMEKGPIDAITGEARYSLSEDKLIRQQIEYKTLILNCVNP DNENSPEIPVKVLNCDTITQVKEKILDVYKNV
PYSQRPRAVDMDLEWRQGRIARVVLQDEDITTKIEGDWKRNLTMHYQVSDRSVVALVPKQTSSYNIPASASISRTS
ISRYGDSSFRYTGPSDSLRSRAPMITPDLESGVKVWHLVKNHHDGQKEGDRGSKMVSEIYLTRLLATKGT LQKFVD
DLFETLFSTVHRGSALPLAIKYMFDLDEQADRHSIHDTDVRHTWKSNCPLRFWVNVIKNPQFVFDIHKGSITDAC
LSVVAQTFMDSCTSEHRLGKDSPSNKLKYAKDIPSYKSWVERYADI AKLPAISDQDMNAYLAEQSRLHAVEFNML
SALNEIYSYVSKYSEELIGALEQDEQARRQLAYKVEQLINAMSI ES

human deoxycytidylate deaminase (SEQ ID NO:59)

atgagtgaag tttcctgcaa gaaacgggac gactatttgg aatggccaga gtattttatg
gctgtggcct tcttatcagc acagagaagc aaagatccaa attcccaggt cggcgccctgc
atcgtgaatt cagaaaacaa gattgtcggg attgggtaca atgggatgcc aaatgggtgc
agtgatgacg tggtgccttg gagaaggaca gcagagaata agctggacac caaataccgg
tacgtgtgcc atgcggagct gaatgccatc atgaacaaaa attcgaccga tgtgaaaggc

tgtagtatgt atgtcgcctt gttcccttgt aatgaatgcg ctaagctcat catccaggca
ggtataaaaag aagtgatttt cacgtctgat aaataccatg atagtgcga ggcaactgct
gcgaggctcc tgtttaatat ggccgggggtg acattccgga aattcatacc gaagtgcagc
aagattgtca ttgactttga ttcaattaac agcagaccga gtcaaaagct tcagtgaagt
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tgaactattg ctttaggatt taaaataggg gagcctgtgg tggcctgggtg cacagggtca
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tctgaacatc tggcccaagt gaagcatggc ataatagtgc cttggaagaa aattaggcct
caaagtacag tagcattgaa gtgtttgctg cagagttgag ggaaaccccc agccaccctc
ccggaatccg agatagggtg gcacatctgt cctgacagac gaggagtgtg actgaaccag
gaatatttcc tccattcctg ctctcccact gcacacaggg tgggtggcaca ttatccctct
gggggggtggg gacgcctgtt gttttggctc aatttgggtt tgttgggtcac atggagctct
tccatttcgt ttagctgaat aatgagttgt tcctagagga gacagcctgt ctctccttgt
tgcccccaaa gcccatgccc tgccgtgggtg gcagctgggg ctgtggatgg gaggggtccc
caacatggat gtgttgcccc tcttcgcat gccaacgcag ttcattgtaca aggccctct
gcaactggag agaaaattaa ttcctatccc gtgagtggat tgtgagaaat tccaccacg
tggagacagc ttactgcagc actgttgggtg ttcggagctc ttctgtgccc tggctccatg
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aggttttctt taccctaaag attattacct ttttaaagt ctcttatatt ttcattgagt
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taccaatatt attaaaatct tattaataatc t

human deoxycytidylate deaminase (SEQ ID NO:60)

MSEVSKKRDDYLEWPEYFMAVAFLSAQRSKDPNSQVGACIVNSENKIVGIGYNGMPNGCSDDVLPWRRRTAENKLD
KYPYVCHAEINAIMNKNSTDVKGCSMYVALFPCNECAKLIQAGIKEVIFTSDKYHDSDEATAARLLFNAGVTFRK
FIPKCSKIVIDFDSINSRPSQKLQ--

Please insert the accompanying paper copy of the Sequence Listing, page numbers 1-103, at the end of the application.